Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair NorthAmerican User Groups Newsletter

Volume 7 No. 1 Spring '97

Chairman Donald S. Lambert Auburn, IN

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T/SNUG Information

We wish to support the following platforms : ZX-80/81, TS-1000, Spectrum, TS-2068, Z88 and QL. If you have any questions about any of these fine Sinclairs, contact the:

Chairman
Chief Motivator
Donald S. Lambert (ISTUG)

Vice-Chairmen

Tape & JLO PD Library
D. G. Smith
415 Stone St.
Johnstown, PA 15906
814 535-6998

Z88 Library
Dave Bennett (HATSUG)
329 Walton St. Rear
Lemoyne, PA 17045
717 774-7531

ZX-81 PD Tape Library
Ed Snow
2136 Churchill Downs Cir.
Orlando, FL 32825
407 380-5124

RMG Enterprises
Rod Gowen (CCATS)
14784 S. Quail Grove Cir.
Oregon City, OR 97045
503 655-7484 FAX 503 655-4116

TS-2068
Rod Humphreys (VSUG)
10984 Collins Pl.
Delta, BC V4C 7E6 Canada
604 583-2819

QL PD Library
John Donaldson (CATUG)
835 Foxwood Cir.
Geneva, IL 60134-1631
708 232-6147

AERCO & Z80 Emulator
Keith Watson
41634 Amberly Dr.
Mt. Clemens, MI 48038

BBS ----=GATOR=----
Bob Swoger (CATUG)
613 Parkside Cir.
Streamwood, IL 60107-1647
630 837-7957 Work 847 576-8068

Any of the above can also be reached by e-mail through the **MMCC BBS 847 632-5558**

ZXir QLive ALive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a VOLUME of four newsletters per year; beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space.

It is the user groups and individual subscribers, rather than the vendors, that provide the pecuniary support for this newsletter. Vendors and developers receive this newsletter free of charge, though contribution from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer
LarKen PD Library

You can keep T/SNUG alive by an annual contribution of $12 for one VOLUME made payable to Abed Kahale. Send check to:-

ABED KAHALE
3343 S FLAT ROCK CT
SIERRA VISTA AZ 85635-6874
520 378-3424

Back copies are available for $0.75 each postpaid.

Trea$ury Note$

As of March 3, 1997, we have a balance of $1234.63

Article Contributions

Send in your articles by tape or disk and your inputs to:—

DONALD LAMBERT
1301 KIBLINGER PL
AUBURN IN 46706-3010
Phone 219 925-1372

By hardcopy or modem (300-14.4) to:
Abed Kahale
E-mail: 103457.2440@compuserve.com

GATOR's
TWISTED PAIR

To better inform the Sinclair Community, four 24-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the files sections of these boards. Bulletins and ads are available to all.

Q-Box BBS **810 254-9878**
Utica, Michigan
SCC Sever **Jose Moreno**
http://members.tripod.com/~helpme/
SOL BBS **520 882-0388**
Tucson, Arizona
MMCC BBS **847 632-5558**
Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR Sinclair on the 24-hour **MMCC BBS** and include the name and E-Mail address of the user you wish to reach. Then check the MMCC BBS from time to time if you expect a reply.

We encourage you to excahange mail and contribute to the UPLOAD section. Call and ***register*** using your first, last name and phone number along with a password you won't forget. ***Write It Down!*** Do not try to do anything else at this time.

When you call-in the next time, you will have Level 5 security and be able to enjoy full user privileges. The BBS has smaller sections called conferences. Select "J " for "Join a Conference". Select "TIMEX" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use extension .ART for articles, .ADS for ads and .NWS for news when UPLOADing.

For help, contact the SYSOP, Bob Swoger, by leaving a message, mail, E-Mail or phone.
Bob_ Swoger-CENG108@email.mot.com

Input/Output

by Abed Kahale

To: Abed Kahale <103457.2440@compuserve.com>

You know, SOL BBS is really unique.....Didn't plan it that way, but that's the way it's worked out! For, it runs ON a 2068.

This means two things: First, it is arguably The Only BBS In The World, operated completely by a 2068, with the assistance of LKDOS and four disc drives plus RAMDISK. Also, Dallas SmartWatch, Brother 1109 large printer, TS-2040 small printer, Larry Kenny's own ZX80 serial port, and Larry's modem SX212 by Texas Instruments.

Well, this is surely not an unaided 2068! But, with the assistance of that short list of innocuous computer peripherals, I can take any of these little 2068 boards in my office here, and access the world of the Internet!

Guess that's what they mean by saying, "It's An Open System."

David Lassov Tucson, AZ

From: Jose Moreno <jose_m@internetmci.com>
Subject: SCC BBS

To: Abed Kahale <103457.2440@compuserve. com>, Bill Cable <bcable@triton.coat.com>, CATS News-Letter <mf0002@epfl2.epflbalto.org>, Chic Computing Club <100023.477@compuserve.com>, FWD Computing <fwdavis@hotmail.com>, Jon Kaczor <75363.1127@compuserve.com>, Peter Liebert <p.liebert@t-online.de>, Tim Swenson <swensont@projtech.com>

Greetings everyone!!!!!

This is a mass-mailing that I have created from all the Internet users that subscribe to ZQA!. I am writing to inform you of the following..... I have read the latest ZQA!, and in there it states that SCC BBS in down for good. This is true... It went down due to lack of user support, I barely served any calls during the full one year of it being up. That's the bad news, the good news is that SCC may now be found on the Internet at the following address **http://members.tripod.com/~helpme/.**

Go there and check it out... I have been working very hard to make it a very good website... Tell all your Sinclair friends on the Internet..... Spread the word..... Thank you

Jose Moreno SCC Server

First, the ZXir QLive Alive! newsletter looks as professional as any user group newsletter I've seen. You should be commended-- but you probably haven't been. If my past experience as a local user group newsletter editor is any indication, "silence" is about the best compliment you get as an editor. A mob carrying torches and heading toward your house would probably be an indication that things are not going well.

Anyway, the newsletter says "Re-Up Time" has arrived again (where do the years go??), and considering the value of T/SNUG in general and the newsletter in particular, I am more than glad to make my yearly monetary contribution.

As to non-monetary contributions, I saw the "Chic" article printed in the last issue, so I assume the LarKen article is coming up. I was hoping I'd have a bit more information on the Byte-Back parallel printer problem by publication time, but I've no definitive answer yet. I may have a further review coming up for submission; I'll send it e-mail if I get one put together.

Keep up the good work!

Gil Parrish Beggs, OK

Thank you Gil. I am sure that ZQA! members do appreciate the work and effort. The only thing that is missing is someone close by besides myself to proof read ZQA! before publishing.

I recently re-joined the Long Island Sinclair User's Group (LIST) and heard about the newsletter produced quarterly by ZXir Clive Alive! I wrote to Donald Lambert for information, and he suggested that I send you my contribution for a year's subscription to the newsletter and the buy-sell list which apparently accompanies the newsletter. My check is enclosed,

I understand that the subscription year starts with the Spring issues due out March; which means that I have missed the Winter issues due any day now if not already published. Please advise if I can get a copy of the Winter issue by sending an additional check in an amount you may suggest.

I work mainly with the Timex Sinclair Model 2068 with a Spectrum adapter in the cartridge slot.

Seymour H. Miller Forest Hills, NY

Welcome to our Community

A copy has been mailed to you.

Dear Abed:

Here is the article on 2068's and the Internet. It is too long for MSCRIPT, so it's coming to you in two parts: intrnet.Ct and hints.Ct. Please, MERGE the two and print Internet first, followed by the hints.

OK, a lot of characters are missing from my screen, so I'll SEND them again, this time in HALF DUPLEX. And, be sure to tell me if it comes out better, as I won't be able to see a thing!!

David Lassov

Half Duplex did not work.

Want to pass on this problem with LarKen MaxCom. IT IS INTERMITTENT: the worst kind!! .....

Suppose we want to enter a long message into a BBS or as Email into the Internet. Then, we go off-line and

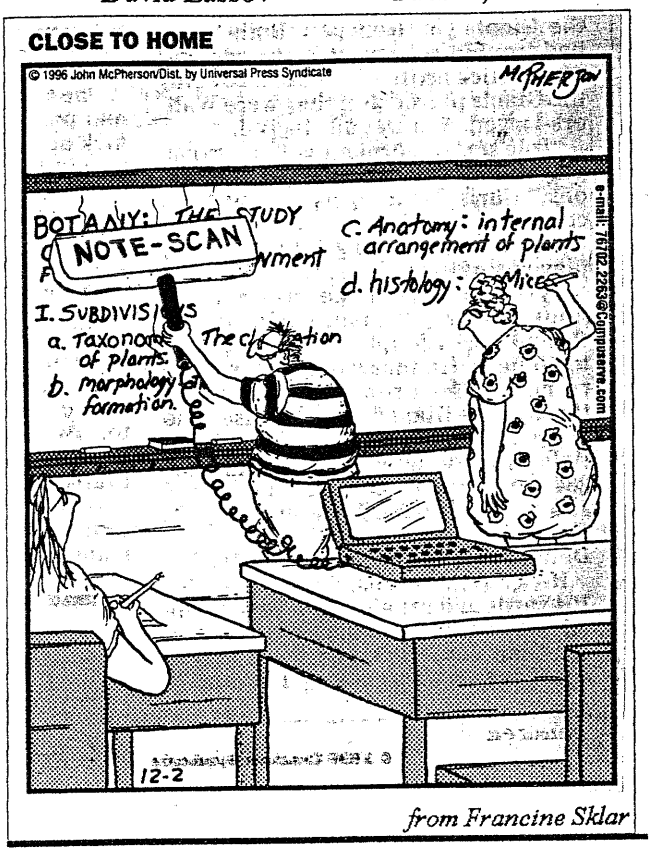
prepare the letter as a text file. Entering the BBS or the Internet, we proceed to upload the ASCII file, containing the message, right?

Well, everything goes fine, until the host computer system makes its first disc access. Then, our 2068 system pauses, waiting for a signal from the host to resume.

The problem is, that that signal rarely comes, or, more likely, MaxCom fails to respond.
This is a nasty problem, since it appears to be a defect in the machine CODE, both MOCOD.C1 and MAXBBS.C1 .... The system point enters the CODE, in order to effect ASCII transfer, and never emerges, to finish ASCII transfer!!

HAPPY NEW YEAR

David Lassov Tucson, AZ



from Francine Sklar

I just mailed you a load of articles, all for (maybe) next issue of ZQA!.

There are five menus, which BOTH daisy1a.art and Daisya.ART discuss. In addition, I had to COPY the Main Menu for Daisy2a.ART on the 2040.
Hope that's OK.

Also wrote you a letter about a long 2040 listing. Hope it copies well, as the topic is fascinating, BOTH a listing of a Post Mortem Dumper and a study 2068 BASIC and the way it stores and uses the values of PI. It is a study in the cool ways of optimizing 2068 BASIC code !

KEEP ON TIMEX'n=========>>>>>>>>>Dave

The following groups still meet, those who still publish newsletters are indicated by 🗐:

{See the Ads section for addresses}

Don Lambert (ISTUG)
219 925 1372

Phil Kwitkowski (CATUG) 🗐
603-584-6710
Rod Humphreys (VSUG)
10984 Collins Pl.
Delta BC V4C 7E6 Canada
Harvey Rait (LIST) 🗐
George Chambers (TTSUC)
14 Richome Ct.
Scarborough, ON Canada
Barry Washington (CATS) 🗐
301-589-7407
Gary Ganger (DMA)
(NESQLUG) 🗐
617 233-3671
Jon Kaczor (GCTSUG) 🗐
E-mail: 73177,333@compuserve.com

Top 10 Ways MicroSoft Would Change The Auto Business

10. New seats would require everyone to have the same butt size.
9. We would all have to switch to MicroSoft gas.
8. The US government would be forced to rebuild all of the roads for MicroSoft cars; they will be able to drive on the old roads, but they will run very slowly.
7. The oil, alternator, gas and engine warning lights would be replaced by a single 'General Car Fault' light.
6. Sun MotorSystems would make a car that was solar-powered, twice as reliable and five times as fast, but would run on only 5% of the roads. Intel Motors would make an engine with twice the horsepower but will only run 10% faster.
5. You would be constantly pressured to upgrade your car.
4. You could only have one person in the car at a time, unless you bought a Car95, CarNT or Car 97 — but then you would have to buy ten more seats and a new engine.
3. Occasionally, your car would die for NO apparent reason and you would have to restart it. Strangely, you would just accept this as normal.
2. Every time the lines of the road were repainted, you would have to buy a new car.
1. People would get excited about the new features of the latest MicroSoft cars, forgetting that these same features had been available from other car makers for years!

Attribution: According to one source <Thomas Head (thomash@blue.misnet.com)> this list was originally published in either the "AutoWeek" or "Car and Driver" magazine.

To Jay (Shepard)

A guy walks into a bar and sits down. He starts dialing numbers on his hand like a telephone. The bartender walks over and tells him that it's a very tough neighborhood and he doesn't need any trouble here. The guy says, "You don't understand. I'm very hi-tech. I had a phone installed in my hand because I was tired of carrying my cell phone." The bartender says, "Oh, yeah? Prove it."

The guy dials up a number and gives his hand to the

bartender who talks into the hand and carries on a conversation and then hangs up. "That's incredible," says the bartender. "I'd have never believed it!" "Yeah," says the guy, "I can keep in touch with my broker, my wife, you name it! By the way, where is the men's room?"

The bartender points to the door in the corner. The guy goes in and doesn't come out for the longest time. Fearing the worst, given the tough neighborhood, the bartender goes in and finds the guy with his pants off, spread-eagle up against the wall, and a roll of toilet paper up his butt.

"Oh my God! Did they rob you? How much did they get?" The guy turns and says, "No, no, I'm just waiting for a fax!" (I'll bet he's got a hand-held scanner too. %^)

As for the printer interface, you can see drivers I've written before in UPDATE! and I think in NTN. One was for a DMP 130, the other for an EPSON. I use TIMACHINE to turn it into machine code.

What baffles me is that drivers for your printers are all available for the IBM somewhere, I believe on the DOS disk you got with your machine. Lets get these questions answered for me: platform: IBM - Right!

What are you trying to print and can't, a picture? Just text? From what application? Just exactly what is the model printer you are having trouble with? As for ribbons, I know a place - and they are cheap! --==GATOR==--

---

To: Bob_ Swoger-CENG108@email.mot.com
From: JShepard-Boxholm@worldnet.att.net@INTERNET
on Tue, Jan 14, 1997 8:09
Subject: rit' prtr drvr

No, I've never written my own printer driver per se. The Z88 has a printer editor where I believe you are altering it's driver for special needs if you know the codes, such as underline ON = 27,45,1 & italics = 27,52, etc. I never felt that was all that is in a driver. I thought it involved being able to write machine code. I would like to get the Gemini to work with my PC (IBM).

I have no idea if the control codes are part of writing a driver, but that won't keep me from babbling a moment on the subject. My manual for the Gemini does not list the control codes. However, in '83 someone in either SMUG or Sinc-Link wrote quite a bit about the Smith-Corona Fastex 80, which lead me to purchase one. (The ribbons are now hard to find). The manual for it has four pages control codes with reference to their name, dec & hex equivalents, e.g., esc w = dec. 27,87 = 1b 57 which is turning off or on Enlarged mode.

This is all that has been on my mind for a while that I thought "Chicago Bob" could help me, and I'll not bother you for a while so our phone lines can cool off. Thank you so --==+++==-- j

---

Dear Abed,

It is time for me to renew ..... I have received a lot of help from a lot of people in getting my TS-1000 going again. I have also received help on finding upgrades for it. I have been very busy the last couple of months with a new job, college and moving. I will answer everyone that has contacted me, it might take me a few more weeks before I am completely settled in.

In looking at the back pages, I see a few articles in volumes 1 and 2 that I would like to read. Do you still have a few copies of those? I am interested in all four issues of vol. 1 & 2.

Once again Thanks to everyone, I will answer you all.

Ken Harbit Fresno CA

Burning the candle at both ends? How well I know - my college days. Any of the back issues are available for $.75 each. Wish you luck.

BELIEVE IT OR NOT

State Residency Application

(1) Name: _____
- ( ) Billy-Bob
- ( ) Billy-Joe
- ( ) Billy-Ray
- ( ) Billy-Sue
- ( ) Billy-Mae
- ( ) Billy-Jack
- (Check appropriate box)

(2) Age: ____

(3) Sex: ____ M _____ F _____ N/A

(4) Shoe Size: ____ Left ____ Right

(5) Occupation:
- ( ) Farmer
- ( ) Mechanic
- ( ) Hair Dresser
- ( ) Un-employed

(6) Spouse's Name: _____

Relationship with spouse:
- ( ) Sister
- ( ) Brother
- ( ) Aunt
- ( ) Uncle
- ( ) Cousin
- ( ) Mother
- ( ) Father
- ( ) Son
- ( ) Daughter
- ( ) Pet

(7) Number of children living in household: ___

Number that are yours: ___

(8) Mother's Name: _____

(9) Father's Name: _____(If not sure, leave blank)

(10) Education: 1 2 3 4 (Circle highest grade completed)

(11) Do you ( ) own or ( ) rent your mobile home?

(12) Vehicle Information:
- ___ Total number of vehicles you own
- ___ Number of vehicles that still crank
- ___ Number of vehicles in front yard
- ___ Number of vehicles in back yard
- ___ Number of vehicles on cement blocks

(13) Firearms you own and where you keep them:
- ____ truck
- ____ bedroom
- ____ bathroom
- ____ kitchen
- ____ shed

(14) Model and year of your pickup: 194___
(15) Do you have a gun rack?
( ) Yes ( ) No - If no please explain: _____
(16) Newspapers/magazines you subscribe to:
( ) The National Enquirer
( ) The Globe
( ) Soap Opera Digest
( ) Rifle and Shotgun
(17) Spottings:
___ Number of times you've seen a UFO
___ Number of times you've seen Elvis
___ Number of times you've seen Elvis in a UFO
(18) How often do you bathe:
( ) Weekly
( ) Monthly
( ) Not Applicable
(19) Color of teeth:
( ) Yellow
( ) Brownish-Yellow
( ) Brown
( ) Black
( ) None

According to one source (thomash@blue.misnet.com)

Hello Abed,

As I mentioned previously, I was hoping to update my LarKen article for the newsletter if I learned anything about the Byte-Back printer interface problem prior to publication. I'm not sure where you are publication-wise, but I've confirmed that a port conflict is involved, and hence the problem is not solvable with some minor tinkering to the Byte-Back printer driver, as I had hoped. I've ended up buying an AERCO printer interface for use with my LarKen.

The revised article is attached, if you can make use of it.

Incidentally, do you have **SUPERDRIVER** for the **AERCO**, or the TS1000 printer driver for it?

Gil Parrish
Route 1 Box 705
Beggs, OK
73430.1546 @compuserve.com

Sorry Gil, but I don't have either of them may be one of our members can lend a hand !!!

Dear QL user,

By now you will have heard that S.J.P.D. SOFTWare will be closing on 30th January 1997. This was due to me suffering another prolapsed vertebral disc commonly known as a slipped disc. This means that I will have to undergo surgery to have the disc removed. This is the second disc to suffer as I had the same problem 15 years ago and had surgery then. Sitting at a computer has become very painful.

In a depressive mood, I decided to close down S.J.P.D. SOFTWare. I contacted my building society and gave notice of closure of the S.J.P.D. SOFTWare account. I also rang all my suppliers and closed down the accounts with them. I also contacted the editors of QUANTA & QL TODAY to give them notice of closure of S.J.P.D. SOFTWare.

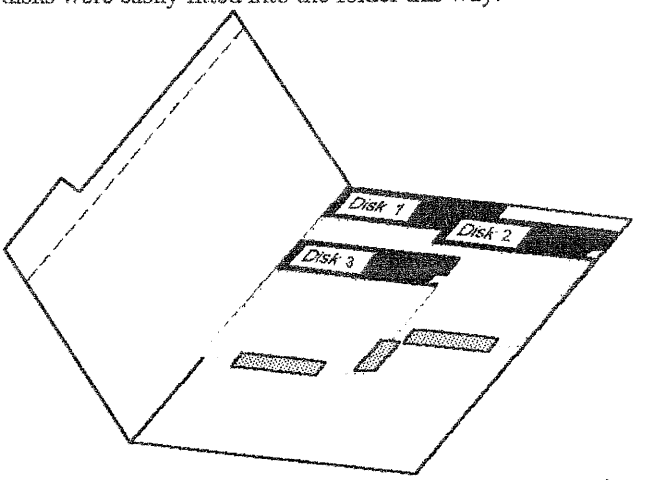
I received a lot of letters/faxes/email of support and expressions of sadness of the closure of S.J.P.D. SOFTWare. These and a more positive mood as to my medical condition has prompted me to reconsider the closure. I am now very please to announce that I will continue to supply QL Public Domain, Shareware & freeware. However as stated, I have now closed down all S.J.P.D. SOFTWare accounts, so I will offer these services under my own name. This means that all Cheques must be made payable to "S. JOHNSON" Any orders received after 30th January 1997 with cheques payable to S.J.P.D. SOFTWare will be RETURNED. As I have new banking arrangements I will NOT be able to accept EuroCheques, sorry for any inconvenience this may cause but EuroCheques have always caused a problem.

All the disks continue with the same disk numbers. I will slowly remove all references to S.J.P.D. SOFTWare from the disks.

S. Johnson.

Did You Know?

I recently needed to send several 5.25 inch floppy disks in the mail. I had some single disk mailers and some disk boxes available, but neither of these quite filled the bill. The solution was to take a manila folder and trim it so it would fit in a standard 8.5 by 11 envelope that I had available. Then it was a simple matter to tape the disk sleeves to it. The tape used should be some kind that can be removed without tearing the sleeve. You can put disks on both side of the inside of the folder if needed. Thirteen disks were easily fitted into the folder this way.



The disks were staggered so that they wouldn't catch on one another, and an accompanying letter was placed inside the folder before mailing.

Les Cottrell
108 River Hts. Dr.
Cocoa, FL 32922-6630

Hi, Abed

As you can tell I'm at a different email address. George went and upgraded to a new NEC computer. I can now be emailed at Juno. Please send all future email messages to me at the new address, although I'm trying to

get my TS2050 up and going. Do you still have and operate a TImex-Sinclair?

Would you please resend your last message to me at the Juno address, the message with Lassov's article? I'd appreciate it if you could. The last time you sent this message we were still using George's old computer and the printer was malfunctioning. Half of the message you sent was gibberish when it printed on the old printer.

Bob Swoger is assisting me in my attempt to utilize my TS2050 modem. The last time we talked my system was not downloading properly. I don't know what's wrong with my new modem - but Bob is trying to figure it out.

I'll be giving him a call this weekend and hopefully he'll have the problem figured out. I'm enjoying computers more and more.

Well, that's all for now. Take care and be in touch. Your friend,

~~Email: abqplondke@juno.com~~

Jeff DeCourtney Albuquerque, NM

Sorry for the delay, but I was out of town for a while visiting my first grandson in Atlanta, GA. A copy is in the snail mail. Yes I still use my TS2068 with LKDOS, two disk drives and RAMDISK.

Sender: Bob_Swoger-CENG108@email.mot.com

I just read LIST for January. There is for sure to be a QL Show USA sponsored by NESQLUG on May 3, 1997 at Bedford, PA. It must be near Washington DC as Dulles Airport is the one to fly into.

Frank Davis will be there. Contact Bill Cable bcable@triton.coat.com and Ed Kingsley ~~elk4@aol.com~~ for details.

It would be a good idea to get this news into the next ZQA! would it not or would it be too late? It says Tim Swenson's email address is swensotc@ss2.sews.wpfb.af.mil - is that true or is there a new address since he is out of the military? When you get the LIST you will be able to pick up mode email addresses for the LIST group. Seems like we have been out of touch for a while, is all well with you and Jan?

Sure has been cold here. Bet you are thankful you are there and not here. We will have no January meeting because of busyness and cold weather. --==GATOR==--

Tim Swenson E-mail address was in the last ZQA! : swensont@projtech.com

Your E-mail Address has changed, apparently you didn't receive my E-mail.

To: 103457.2440@compuserve.com
Subject: Di-Ren Infolink News
X-Mailer: Di-Ren news_bas
X-User: Di-Ren Email

Email Address Change

Please immediately change the di-ren@di-ren.co.uk Email address to support@di-ren.demon.co.uk
This change is due to continuos handling problems with the di-ren.co.uk Email address handler.

Robin BarkerDi-Ren

Dear Abed,

... Even though the Toronto Timex-Sinclair Users Club shut down a couple of years ago, there were eight or so members who did not wish to lose friendships that had developed over the years, and who, as a consequence, continue to meet once a month, at my home. Our discussions encompass the whole computing field, not simply the Sinclair product. Most of us have PC's, but also have a Sinclair/Timex of one sort or another.

Anyway, what I really wish to do is compliment you and Don Lambert, and all others who continue to put such effort into the Sinclair scene, for the benefit of us all. Sincerely, and Best Wishes for the future.

George Chambers Scarborough, Ont. Canada

Thank you George, it is conforting to know that all is not lost. And best wishes for the group

---

Abed,

Nice talking with you tonight. Please enroll me in T/SNUG.

I have started going thru the earlier issues of UPDATE! as you suggested hoping to find a solution to my printer/2068 problem.

With the AERCO CP-68 I acquired recently from RMG, my 9-pin printer Star NX1000 works fine, but when I try to use my new Epson 8260 24-pin printer, I get gibberish. Rod was not able to help.

Can you help?

Thanks for your patient listening.

Sincerely,

Earl L. Kielgass
2015 E. Duke Dr.
Tempe, AZ 85283-2413
602 838-4308

Welcome to our Community

The article I had in mind is in the October '93 UPDATE!, page 44, by the late Larry Crawford; "24-pin Bit Image Graphics".

This is not exactly what you are after, sorry to say, but some member must have had the same problem. ***Anyone please?***

QL Show

Thanks for helping spread the word. Although this is basically a QL event anyone is welcome and Frank Davis will be there offering a wide range of Sinclair products. -- Bill

Here are the initial details for the '97 North American QL Show in Bedford, PA. Although Bedford is on an interstate exit this is basically in the country. There is no public transportation but the restaurant is within walking distance of the motel. Date of the Show : Saturday May 3, 1997

Location of the Show

Carriage House Restaurant
Exit 11 off the I-70 & I-76 Interstate
Bedford, Pennsylvania USA
Phone : (814) 623-1174
Time of the show : 9 AM - 4 PM
Bedford is half way between Harrisburg and Pittsburgh on Interstate I-70 & I-76

Format of the show

The show will include talks and demonstrations by well known QL personalities and sales by a number to vendors. The show will take place in the main dining room of the restaurant and lunch is included in admission to the show. After the show a banquet will be held at the same restaurant at 6 PM Saturday evening. All the newest QL hardware and software will be there to see and purchase.

Admission Fees

$12 per person if you notify Bill Cable in advance $15 per person at the door

This includes admission to the show and LUNCH and general refreshments. throughout the day.

Recommended Motel

Super 8 Motel
Business Rt. 220 N
Bedford, PA 15522
Phone : (814) 623-5880
FAX : (814) 623-5880
Also at Exit 11 of the I-70 & I-76 Interstate at Bedford.

Rates

Double occupancy with one double bed $40.91 Double occupancy with 2 separate beds $44.72

When you make your reservation mention Bill Cable and the QL show to get this special rate. The rate is per day. There are 57 units, Exercise equipment, HBO, Free local calls, waterbeds, children under 12 free.

Recommended Airports

Dulles International Airport
Washington, DC This is about 2 ½ hours by car from Bedford
Pittsburgh Airport
About 2 hours by car to Bedford
Harrisburg Airport
About 2 hours by car to Bedford

A more detailed agenda will be released on February 10th. There will be a dinner gathering 6 PM Friday night also at the Carriage House Restaurant. Those flying in to airports and needing rides to the show please contact Bill Cable and every attempt will be made to connect you with a local QL person going to the show who can meet you and give you a ride. Likewise, QL people driving to the show who would like to give a ride to a QL enthusiast from far away please contact Bill Cable.

This is the 5th annual North American QL show. It is being sponsored by NESQLUG (The New England Sinclair Users Group) and all details are being handled by :

Bill Cable

NESQLUG Director
RR3 Box 92
Cornish, NH 03745 USA
Phone : (603) 675-2218
E-mail : bcable@triton.coat.com

FROM THE CHAIRMAN'S DISK

Donald Lambert

After all the lousy weather maybe we are headed for spring. BUT! it did snow this morning and it has almost all melted. I have my taxes figured and mailed so things do look better now. With that moaning and groaning about the weather and taxes out of the way

I have progressed in my typing in the TUTORIALS from the newsletters and currently I am on my 4th disk of material. More on that later.

I had a call from Earl Kielgass; 2015 E. DUKE DRIVE; TEMPE AZ 85283; Tel (602) 838-4308; in which he sought information on how to use his new 24-pin EPSON printer on the T/S 2068 using the AERCO printer interface. That was Saturday February 18th. He uses the LarKen disk interface so I searched for 24-pin printer software and I found two disks BUT they were for the Oliger. I contemplated the problem of transferring the files from Oliger to LarKen but before I started, I once more went through my master file of LarKen software. I found two disks but the labels weren't exactly what I thought I was looking for. A comparison of the directories of the disks revealed that the LarKen was almost an exact duplicate of the Oliger material. So I used D.U.S. and COPYII.B I to copy the disks for Earl. Earl called Saturday February 22nd to report that the disks had arrived and that the other disks I had sent looked very interesting. He had not tried to do anything with the printer information. If any one has anything on a 24-pin EPSON printer and the AERCO printer interface let either me or Earl know. While Earl only has the LarKen disk interface, I have the Oliger, the LarKen and the AERCO disk interface. Earl only has 40 track (DSDD) drives.

On Sunday I had a call from Fred Stern in which he had his one and only copy of MASTERSCRIBE (a T/S 1000 work processor) copied over. apparently his daughter had grabbed what she thought was a blank cassette to copy a CD. I steered him to where I thought there was a copy. Discussion led to my mentioning the TUTORIAL project but he only has the AERCO disk drives both for the ZX81 and the 2068. He was interested but the thoughts of all that paper if printed out and the cost of printing and mailing. After the phone conversation ended I remembered the article that Les Cottrell had wrote about the Radio Shack Mini audio amplifier 277-1008 for $11.99. Put a 9 volt battery in it and plug it in between the two 2068s.

I have two 2068 computers located 51 inches apart on separate computer desks. The right hand one is set up with the AERCO disk system only. The left had 2068 has the LarKen/Oliger disk systems setup. Normally I use the Oliger disk system and the others when and if needed or the fancy strikes me. The left hand computer with the Oliger interface has an audio cord from the MIKE jack to the INPUT of the audio amplifier. The audio amplifier EXT. SPEAKER jack goes to the EAR jack of the AERCO computer. I do have one extra item in the line up and that is a meter to monitor the output of the amplifier to keep from blasting the EAR of the AERCO computer. The files of the TUTORIALS are in MSCRIPT. And I have MSCRIPT V5.5 for each of the disk systems. To transfer the files from Oliger to AERCO I power up the AERCO system and got MSCRIPT loaded and a disk FORMATTED. In the menu mode I press the U key to trigger the change from DISK to CASS. I then press the L key to get the LOAD a cassette software and I press ENTER. That gives the cassette LOADing pattern on the monitor. I then turn on the audio amplifier full on (The nine volt battery I am using is just marginal for use according to a Radio Shack battery tester). I then LOAD MSCRIPT and the file I want to transport to the AERCO disk and change the file name if necessary to something that the AERCO will accept and press the U key to trigger the change from Disk to CASS. Then I press the S key to SAVE and when the query to SAVE filename? appears, I press the Y key for Yes and get the start tape and press ENTER. When I press enter the Oliger monitor displays the SAVEing pattern and a brief moment later the other monitor displays the LOAD pattern.

When the LOAD is completed, I go to the AERCO computer and press the U key to trigger from CASS to DISK, then the S key to SAVE and on the SAVE filename I press Y and the disk drive goes to work. When the SAVE is complete, I press C for CAT and press the ENTER key twice to get the CAT done. A look to see if the file SAVED correctly as far as number of bytes, then press the U key to change from DISK to CASS and press L and ENTER to get ready for the next file to be transferred. I found that a printed out directory on the Oliger was a necessity to be able to not miss a file and have the correct file name. It does require concentration to avoid problems. The copying the files from one DOS to the other is not fast but a lot faster than SAVEing to cassette and reLOADing the files. In the future I will transfer the files as I type them in.

I am currently typing in SINC-LINK which was the newsletter of the TTSUC of Toronto. Since I have almost all the issues. I started with their first and am now where they are starting to discuss the various disk drive systems. Some of the early articles are very interesting. I learned more about machine code presented in such a way as to make sense. Of course the early articles were on the ZX81 only. Since I have the newsletters filed by name alphabetically, this will put ZXir QLive Alive! last. BUT! I don't know if SYNTAX is a newsletter or not. I sort of considered it a magazine because of its price. After the newsletters, will be all the magazine articles and there are a lot. Which will give up first? Me, the computer or the lack of any other T/Sers out there? With that I close this issue's column!

IRA Pay-Out *from* THE RAMTOP *by Max Schoenfield*

IRA's (Individual Retirement Accounts) are good those who can afford them. At present you can put up to $20,000 a year into such an account, and reduce your taxable income by the amount of your deposit. You can not withdraw any money until the year in which you become 59½ without suffering a penalty. Many banks have displayed ads telling how much you will have at retirement age, assuming a given rate of interest. Banks offer various options for the systematic rate of withdrawal of funds, but no such information has been advertised.

This program provides for a uniform rate of withdrawal. You must state the beginning amount (how much you have accumulated); the assumed rate of interest (a guess on anyone's part); and the number of years of pay-out (must be equal or less than your life expectancy at retirement).

The process is called ***iteration***. The amount of annual pay-out is first estimated by the variable "c" and then the process is repeated until the balance left after the last pay-out is within one dollar of zero.

The first display shows the amount left after the last pay-out, alongside the annual payment. The second display shows the balance of funds for each year once the pay-out amount has been established.

```
  10 REM "IRA"
  15 REM - by Max Schoenfeld
 20 INPUT "How much money to start? $
";a
 30 INPUT "Expected interest rate? ";b
 40 INPUT "How many years to pay out?
" ;d
 50 PAUSE 50: PRINT "This table shows
how much money remains in the account
after ";d;" years, with the amount of
annual withdrawal."
 100 PRINT'
 110 LET c=a/10
 120 DIM a(d+1)
 125 FOR x=2 TO d+1
 130 LET a(1)=a
 140 LET a(x)=a(x-1)*(b+1)-c
 150 NEXT x
 160 PRINT a(d+1); TAB 12;c
 200 LET c=c+a(d+1)/(d*d)
 205 IF a(sd+1)<=1 AND a(d+1)>=-1 THEN
GO TO 300
 210 GO TO 125
 305 PRINT' "Balance by year, after
paying out ";c-(a(d+1))/(2*d);" each
year"
 307 FOR x=2 TO d+1
 310 PRINT (x-1); TAB 10;a(x)
 320 NEXT x
 330 PRINT'  "Total pay-out is $
";d*(c-(a(d+1))/(2*d))
```

Below is an example of how the program works, Start with $20,000 in the account. Assume an interest rate of .08%. Plan for a 20 year pay-out.

This table shows how much money remains in the account after 20 years, along with the amount of annual withdrawal.

```
1695.2143       2000
-244.19408      2042.3804
35.175967       2836.2755
-5.067121       2037.1549
0.72983313      2037.0282
```

Balance by year after paying out 1037.0237 each year.

```
 1   19562.972
 2   19090.981
 3   18581.232
 4   18030.702
 5   17436.13
 6   16793.992
 7   16100.483
 8   15351.493
 9   14542.585
 10  13668.963
 11  12725.452
 12  11706.46
 13  10605.949
 14  9417.3963
 15  8133.75ge
 16  6747.4323
 17  5250.1987
 18  3633.1863
 19  1886.813
 20  0.72983313
```

Total pay-out is $ 40740.565

The LarKen Disk System *by Gil Parrish*

It is an inherent problem with any user support group that a newbie does not receive the full benefit of prior activity. Obviously, a user who first shows up in April does not get to see the hardware/software demonstration given in March. And because the prior activities are thereafter "old hat" to the people who did participate in them, old subjects may never be raised again.

I was reminded of that recently when I set out to get disk drives for my 2068. I've never had anything except tape drives, so I've paid only the barest attention to disk-drive-related matters. But when I picked up an unused LarKen Disk Interface kit from a T/S enthusiast who never got around to trying it, I suddenly got VERY interested in the subject of the LarKen, only to discover that a basic discussion of what the system is, how you connect it up,

and what it does, seemed to be missing from prior issues of this newsletter-- no doubt "old hat" to most. What's a newbie to do? So, for the benefit of future newbies, this article is a "beginners-eye review" of Larry Kenny's LarKen Disk Interface system, with particular emphasis on set-up.


My first reaction on receiving the kit was-- this is it??? While some LarKen systems may come with disk drives added by the prior owner, the basic kit simply has two smallish circuit boards, a rather-cheesy manual and a disk. Nothing else. The manual mentions almost casually that you also need a disk drive, power supply for the drive and a cable to connect everything up, but does not go into any detail on how this is done. Is connection really so easy, or is the manual deficient on that point?


It turns out to be just about that easy. External disk drive units, having their own power supplies in the case, are available in the used market for a variety of early computers. Some of these drives (e.g., Commodore and Atari) are "intelligent" peripherals and would not be a good choice for a LarKen system because they have been heavily modified for their particular use. But others, like those made for the Tandy/Radio Shack Color Computer ("CoCo"), are fairly generic disk drives that require a separate disk controller-- which the LarKen provides. If you find an external unit housing a drive that meets your needs, you can use it as-is without getting into issues of power cabling and drive configuration at all.


However, if you need or want to replace the floppy drive that comes in an external case, that chore is not difficult. You have a wide choice of replacement drives available to you, since the LarKen will work not only with standard 5-1/4" DSDD drives with 40 tracks per side (which probably has the greatest compatibility with other LarKen users) but also with older 5-1/4" floppy mechanisms like 35-track per side drives, 80-track per side "quad-density" drives, and single sided instead of double sided drives, as well as 3-1/2" drives. Luckily, most drives have standard power connectors and cable interfaces so an old drive can be taken out of an external case and an appropriate one configured and installed fairly easily with the same wiring. "Power splitters" are available from sources like Radio Shack if your external case has one full-height drive and you wish to replace it with two half-height drives (which typically use less power each). Power converters are also available if you want to put a 3-1/2" drive in a space wired for 5-1/4". If you uncover no external drive case to suit your needs, another possible power source is a computer power supply (inside its shielded case) removed from a junked PC or similar. Such unit likely has the disk drive power cables already in place and set to go. But of course, in that event, you'll have to come up with a separate box to house the floppy drives.


Configuring a drive involves setting the drive to the number to which you wish it to respond. The LarKen refers to the drives it controls as "0" for the first one, "1" for the second, and so forth, and most floppy drives use the same designations (although you may run into some that use letters like "A" and "B"). Typically, there are two rows of pins somewhere on the drive circuit board with designations like "DS0" for drive 0 and "DS1" for drive 1, next to different pairs of pins. Look for a small slide-on connector tying a pair of pins together, and place that connector on the pair of pins next to the appropriate drive number. On older drives, you may find instead a configuration shunt, which will require you to cut the connections you do not need (e.g., for drive 0, cut the ones labeled 1, 2, & 3), or alternately, to reconnect up (with solder or wire) a previously-cut connection you do want. These older drives may also require a terminating resistor on the last (highest-numbered) drive; such resistor normally looks somewhat like a regular IC chip with 14 or 16 pins and has the resistor value written on it. So, if you take a pair of older drives out of another unit for this purpose, the one with the resistor will need to be the last drive, or the resistor will need to be pried out and relocated to the drive you want to be last.


The required interface cable, typically a ribbon cable with 34-pin Shugart-compatible female edge-card connectors on both ends, were common a few years ago and should not be hard to find. For instance, the CoCo cable, which is a flat cable without the "IBM Twist" in the middle (a segment of the wires twisted 180 degrees from how they would normally attach), will work. I did not test an "IBM Twist" cable.


In my situation, I removed a full-height 35 track drive from a CoCo external drive unit, and replaced it with two half-height 5-1/4" DSDD 40-track models, utilizing a power splitter. I picked up those drives for about $5 apiece in a used software/hardware store; sometimes whole original PC-type computers can be found in the $10-$20 range and stripped of drives and any other appropriate parts. The new drives didn't exactly fit the case like a hand in a glove (screw holes in wrong position and such), but they did go in, could be locked in place with a little electrical tape, and functioned fine.


As stated, two separate boards are needed by the LarKen system. One slides into the expansion port connector in the back of the 2068; that one, which has a pass-through interface for other peripherals and a 34-pin Shugart compatible card edge, is the actual disk interface to which your disk cable attaches. The other board goes into the 2068 cartridge port on top; this is the brains for the system, and avoids you having to load the operating system every time you turn on the computer. Command-wise, the LKDOS operating system makes your life is a bit more complicated because, when you wish to access the cartridge/drives, you are required to give a RAND USR 100: command (or a PRINT #4: command, if you have previously given a RAND USR 100: OPEN #4,"dd" command) preceding any disk instruction (e.g., RAND USR 100: LOAD "FILE.B1"). Giving such long commands can get old, but the right software can alleviate this (see LogiCall below).

With LKDOS alone, the system can LOAD, SAVE, rename files, erase files, give you a disk CATalogue, send the catalog to printer, and perform other simple tasks. Additional common disk-handling functions are done by separate programs. These extra utilities are what are on the LarKen System Disk, and include such things as formatting, copying whole disks if you have two drives, copying files from one drive to another, and copying files from one disk to another on a single drive (through "disk swapping", which gets old fast since each program on the disk requires at least one and sometime more than one swap from source disk to destination disk and back again). These programs pretty well complete the list of basic disk handling functions, though different and additional utilities are available in T/SNUG's LarKen Library if you want them.

But, as the old carnival barkers used to intone, "You say that's not enough? You say you want more?" Well, the LarKen delivers more in additional features not strictly necessary to its basic mission. For instance, the system has built-in printer drivers that allow the LarKen to work with the AERCO, TASMAN and A&J parallel printer interfaces without loading extra code. It does NOT have built-in code to work with the Byte-Back parallel printer, and therein hangs a tale. I have (you guessed it) a Byte-Back parallel interface. The LarKen instructions state that you can load a separate parallel driver, tell the system where you placed it (with the appropriate POKE), and the system can use it. The cartridge even has some free RAM where you can stash the code and not use up any regular memory. Perhaps for some printer drivers this would be more than enough, but for reasons beyond what "read the manual" would solve, I am unable to successfully load and access the Byte-Back printer driver. I assumed there were lots of folks out there with LarKen/Byte Back systems who could advise me, but the LarKen experts I consulted had never run across this problem. I even dropped a note to David Leech, who is Mr. Byte-Back himself and a very helpful gentleman, but have not received a reply. If anyone KNOWS the solution (not "such-and-such OUGHT to work"), I'd still be interested. But in the meantime, the LarKen works well enough with my 2040 to print out disk catalogs and do other similar light-duty tasks.

The LarKen system supports the replacement of the 2068 ROM with a Spectrum ROM for running Spectrum software, or (with some minor hardware hacking) placing a Spectrum ROM on the interface in addition to the existing 2068 ROM (and here, Bob Swoger can supply you with the needed socket and ROM for $12, see his kind offer elsewhere in this newsletter). The system has a Kempston-style joystick interface, for use on those 2068 or (usually) Spectrum programs requiring Kempston joysticks. Perhaps most importantly, the interface has a "snapshot" feature that allows you to freeze a program in memory and save the image to disk. The primary use for this is moving to disk all those old cassette-based games that autorun.

I stated above that giving those long disk commands preceded by RAND USR 100: or PRINT #4: can get old after a while. I also noted the manual was a bit cheesy. Enter T/SNUG's very own Bob Swoger, who both wrote his own LarKen auxiliary operating system called LogiCall, and rewrote the LarKen manual (which is bundled with LogiCall) to be clearer and more professional-looking. LogiCall, up to version 6.0 now, is a commercial program available for $15 from RMG or FWD Computing (see the ads elsewhere in this issue). A full review of LogiCall is beyond the scope of this article; a review of LogiCall 5.0/5.2 by Abed Kahale appeared in the Spring 94 issue of ZXir QLive Alive!, and Bob Swoger himself wrote a piece on LogiCall for the Fall 1996 issue. But suffice it to say here that it makes your life easier. You can arrange to autoload LogiCall by holding the ENTER button when you turn on the unit. (Actually, this autoload capability is built into LKDOS and is not unique to LogiCall, but LogiCall makes the best use of it.) LogiCall then presents you with a disk menu; you can move to get a menu from another drive with a single keystroke. The system allows you to load the program you want by typing in the name or cursoring down to it; and, you can perform many disk functions (like renaming, getting a disk CATalogue, or erasing) right from the menu with a couple of keystrokes. The software makes calls to certain utilities particularly easy, and even integrates a number of application programs (like Tasword Two and Vu-File) into the LogiCall system so that you may return to the LogiCall menu after exiting such programs without resetting the computer. Abed indicated in his article that using LogiCall was like upgrading from a gear-shift to an automatic with overdrive, and the analogy is useful. Perhaps more precisely, it feels like upgrading from a disk system which is a functional but somewhat awkward add-on to a computer not really designed for disk usage, to a system in which the drives are integrated so well that they appear to have been part of the system from the start. I would definitely recommend the LogiCall software.

Incidentally, LogiCall provides a clue about how to set up your 2068 system to achieve maximum text readability: it automatically changes the video display to light letters on a dark background, the opposite of normal. As you likely know from experience, a light screen tends to be overrun with what Fred Blechman's "The Timex Sinclair 2068 Beginner/Intermediate Guide" refers to as the "crawlies", being "wiggle lines that pervade the picture and are particularly noticeable on boundaries between colors." TVs show a lot of crawlies, and monitors aren't much better. Worse, color displays of any kind-- TVs or monitors-- can also show color bleeding and other color side effects that hurt text clarity. My suggestion is to follow LogiCall's lead as far as it will go by finding a monitor that is monochrome composite (sometimes called "black and white" although usually green or amber on black). These things are practically being given away ($5-$10) when you run into them at garage sales and similar locales. By going light text on dark (which can be done with the appropriate PAPER. INK and BORDER commands if you do not have LogiCall), and by turning

down the brightness on the monitor until the background is completely black, you can get sharp, readable text with an absolute minimum of crawlies and no color bleeding. You will especially appreciate this if/when you go into Display Mode 2 (64 column text) to use Tasword Two or other text applications. I would recommend in particular one of the old Zenith Data Systems monitors, which have a "40-80" switch on back. The "40" setting gives you a normal picture, while the "80" setting widens the aspect ratio of the picture, making those tall & thin 64 column characters fill out a bit more for better viewing. This is a FAR better situation video-wise than having to squint to tell a "w" from a "u" while crawlies and color bleeding run wild across your screen.

Several other types of disk interfaces are available for T/S systems. In the same Spring 94 issue mentioned above is information from The John Oliger Company (see ad elsewhere in this issue) as to "why the Oliger disk I/F with JLO Safe is the best available for your TS-2068". AERCO, Ramex, and Zebra (TOS) are other choices you may run into in the used market. Not having any of these others, I cannot offer a comparison. But I can state that the LarKen (particularly mated with LogiCall) offers a number of convenient features and works quite reliably. It would not be a bad choice for any 2068 owner.

QHJ Announces New Freeware

QHJ Freeware has just recieved the following new QL programs As with all QHJ Freeware files, these can be yours by just sending disks and return postage to the address below.

From **Jonathan Hudson:**

Qeyes (8kb, 1 Jan 97)
PE Button that has two eyes that follow mouse cursor.
2giftif (80kb, 4 Jan 97)
Tools to convert _scn and _pic to GIF, TIFF, or PBM.
MIME Tools (439kb, 1 Jan 97)
Tools to handle MIME files (Binary E-Mail files). Metamail, mailto, splitmail, mmencode, etc.
Ghostscript 2.6.2 release 3 (24 Dec 96)
Program to view and print Poscript files. (3 files)
(506kb, 683kb, 683kb)
QVM .008 beta (145kb, 25 Dec 96)
Quintessential voice mail. Supports QFAX 2.80 Class 2 mode.
QFAX 2.80 (5 Oct 96)
Execs and Docs (225kb)
Support Files (243kb)
Poscript Manuals (157kb)
HTML manuals (89kb)
PS-Printer Bug Fix (88kb, 6 Nov 96)
Fixed Things Utilities (36kb, 26 Oct 96)

From **Jerome Grimbert:**

Comes a Chess program for the Pointer Environment.
chess.zip (184K)

From **Phil Borman:** (all released 6 Jan 97)

Pbox 1.16 Latest Pbox BBS Program
Fido 1.16 Fido mailer and assoc. utils
QWK 1.16 QEK Offline reader
QtoP 1.16 Qbox to Pbox conversion routines

From **Arvid Borretzen:**

Norbak Backup program
Doctor File/Hex editor

From **Dave Walker:**

C68 Compiler Binary Update (68kb, 17 Nov 96)
C68 Compiler Source (390kb, 10 Dec 96)
C68 Compiler Docs (35kb, 10 Dec 96)
(All of the above require C68 4.21a)
GWASS Assembler 3.22 Binary (50kb, 20 Nov 96)
GWASS Assembler 3.22 Binary + Source (224kb, 20 Nov 96)
C68 LIBC 4.22d (75kb, 8 Dec 96)
FPU Support for QDOS 1.12 Binaries (45kb, 1 Jan 96)
QL Profiler (60kb) (Author: Francois Lanciault)
Tells you where C program spends most of its time.

If there is any other software that you have heard about, that is not on this list or my main list, please let me know and I'll look into getting it. All of these files have been downloaded from various web pages. My thanks for those that did this, since it makes getting the software so much easier and faster.

QHJ FREEWARE
C/O TIMOTHY SWENSON
38725 LEXINGTON ST 230
FREMONT CA 94536
(510) 790-7034
http://www.geocities.com/SiliconValley/Pines/5865

Introducing Aurora QL Graphics card

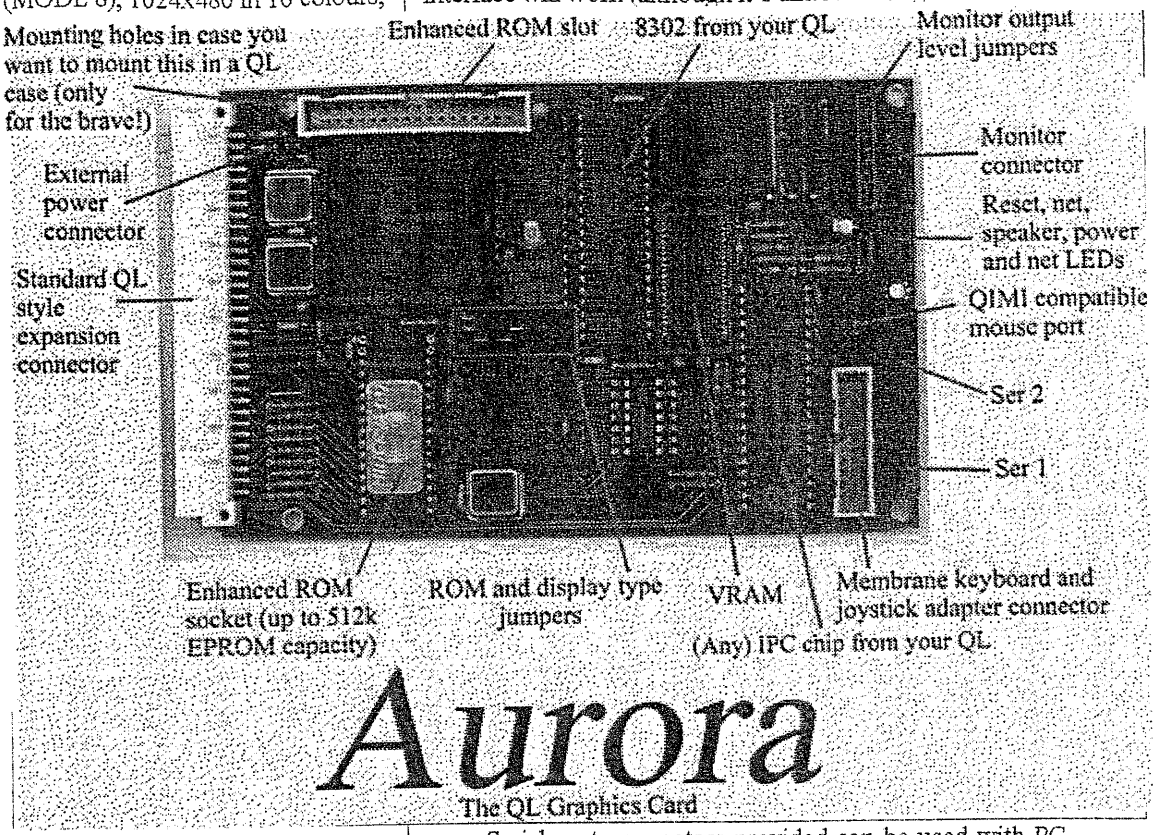
The Aurora is a replacement QL motherboard and a graphics card, all in one product. It is intended to be used in boxed QL's with PC power supplies, but can also (with some work) be mounted into a standard QL casing (this involves soldering, though, and should be undertaken only by people who know what they are doing!!!).

The Aurora requires the user to pull out the 8302 ULA and any kind of IPC (and/or keyboard interface) from their existing QL setups and plug those chips into the Aurora. We can also supply Aurora with 8302 and/or IPC of your choice for an additional price.

Features

Can use old QL and VGA, SVGA or midrange multisynch monitors, displaying various maximum resolutions (depending on the monitor). Output levels can be set using jumpers on the board to acomodate monochrome, TTL RGB, analogue RGB or TTL-level analogue RGB (Microvitec CUB) monitors. Depending on the monitor type various connector adapters may be needed - the board is delivered with a VGA 15-pin mini-D connector adapter (as used with VGA/SVGA and most multisynch monitors)

Maximum resolution is 1024x768 in 4 colours (MODE 4), 512x768 in 8 colours (MODE 8), 1024x480 in 16 colours, 512x480 in 256 colours. The actual maximum resolution displayed may be lower depending on the monitor type. In particular, old QL monitors will display a maximum of 1024x288 if interlacing is disabled, and 1024x576 if interlacing is enabled. VGA and SVGA monitors will also display a maximum of 1024x576 if interlacing is disabled. Refresh frequencies have been optimised to the highest permissible rate on the monitor selected. The Aurora will in any case automatically limit the size of the display depending on both monitor and Aurora's limits. Interlace enabling is left to the user (this can affect resolutions displayed) - interlaced displays will not be of high quality on QL monitors, this being the fault of the monitor itself.



Resolution is selected on the basis of 4 horisontal resolutions: 512, 640, 768 and 1024 pixels. In addition, for any of the 4, one of two aspect ratios can be selected - 2:1, common to QL displays, where the number of pixels in the vertical direction is half of that in the horisontal (512x256, 640x320, 768x384, 1024x512), and 4:3, common to QXL, QPC and QVME users (512x384, 640x480, 768x576, 1024x768).

Modes are selected separate of resolution. Mode 4, and the new modes with 16 and 256 colours are provided. Mode 8 is also provided for compatibility, and will display half the pixels in the horisontal direction with respect to mode 4, just as a QXL would. As on the QXL, flashing in mode 8 is ignored, but the data for it is retained for compatibility reasons.

Programs accessing the original screen area will display a picture in the top lefthand corner, regardless of resolution selected, as long as the screen is in mode 4 or 8.

Please note that in order to use the higher resolutions and more colours, a Super Gold Card is required. The card can be used with a Gold Card as well. The ability to use VGA/SVGA or multisynch monitors is NOT affected by the use of SGC or GC - this will work with both.

Will accept any IPC on the market (superHermes is highly recommended, there is a special superHermes jumper which relieves you from using the superHermes flying lead) and any PC keyboard interface - with some riser-sockets (available on request) even the Falkenberg interface will work (although it's almost as large as Aurora).

Serial port connectors provided can be used with PC-style connectors (as used on PC IO cards), using simple flat cable with press-on connector adapters (IDC10 to D9). Ports use the standard PC wiring so you can use standard PC cables you can cheaply buy in computer shops.

On-board QIMI compatible mouse interface is provided for QIMI users, as the original QIMI interface cannot fit onto the board because of the size).

Enhanced ROM socket can accept QL ROMS (both stacked onto each other, piggyback), Minerva (any version) or an EPROM (including the Minerva EPROM without the Minerva PCB), 64, 128, 256 and 512k sizes are supported, with the OS automatically recognised in the first 48k. We are currently working on extensions which will enable loading of programs from the EPROM if a larger size EPROM is used. Type of chip used in the ROM socket is selected by jumpers.

Enhanced ROM slot can be used with existing ROM slot peripherals (by use of a small adapter cable). For tinkerers, additional lines are supplied - R/W, RESET, EXTINT and a special select line which decodes the unused part of the QLs IO area (15.5k total space).

Membrane keyboard and mouse connectors have been replaced by a 20-pin header. This can be used for applications which need only a few keys, or with an adapter (11 diodes and some cable - total cost about 5 Pounds) the QL membrane keyboard can be connected.

The board is powered from 5V power, we suggest using a QPlane for this (an easy, no-solder solution). In case of fitting into a QL case, a separate connector is used to connect a +5, +12 and -12 (and optional +9V) power supply, which the user has to provide.

PC case compatible header is provided for a reset switch, power LED, speaker, and network LED (we use the PC case Turbo led for this!). A simple cable adapter will connect standard QL net ports to this header as well.

There are NO microdrives and NO TV modulator!!

DRIVERS

Immediate high resolution support is available for SMSQ/E users, in modes 4 and 8, by applying a patch to SMSQ/E. 16 and 256 colour drivers will be available in the future (see below!)

LAST MINUTE NEWS

Tony Tebby is currently working on extended screen drivers which will allow more colours to be used on QXLs and QPCs, and possibly other SMSQ/E systems. We are taking steps to insure that they will work on the Aurora too!

The card will be available in 4 to 5 weeks from Qubbesoft PD, for 120 UK Pounds, plus postage and packing, user manual, SMSQ/E patch software and utilities, and VGA lead included.

FUTURE PRODUCTS

We intend on producing a successor to the Super Gold Card, again we haven't thought of a name for it yet but it might be called 'The Gold Fire'. The project name we have given it is 'The Super Duper Gold Card', this doesn't mean it is going to be called this when we release it for resale. Early specifications are as follows:-

Upto 64Mb of RAM using a 72 pin SIMM, options being 1,2,4,8,16,32 or 64MB. A Bi-directional Parrallel port enabling connection of back-up devices etc. An I2C port similar to the one on Minerva.

Other items that we are looking into producing are an ETHERNET Card for the QL, which will speed up the QL -> QL Network. A FLASH EPROM card that can be programmed and re-programmed from software.

If their is anything that you feel the QL is lacking, hardware wise that is, please let us know and we will try our best to look into it and see if it's possible. For further information on any of the products we carry for the Sinclair QL please contact us at the address below:-

QUBBESOFT P/D
38, BRUNWIN ROAD
RAYNE, BRAINTREE
ESSEX. CM7 5BU
UK
TEL: +44 (0)1376 347852
FAX: +44 (0)1376 331267

QL Hacker's Journal

#26 December 1996 **Supporting All QL Programmers** by Tim Swenson

The QL Hacker's Journal (QHJ) is published by Tim Swenson as a service to the QL Community. The QHJ is freely distributable. Past issues are available on disk, via e-mail, or via the Anon-FTP server, garbo.uwasa.fi. The QHJ is always on the look out for article submissions.

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Editor's forum

It's hard to believe that the last QHJ came out last May. What have I been doing? Well, let me tell you. Since May I have had a number of life changes that have kept me busy.

The first is a change in jobs. I decided to leave the Air Force and seek employment else where. I spent a number of months looking through technical career newspapers and various technical job related web pages, looking for job openings. I found the San Jose Mercury News Talent Center to be about the best place to look, esp. for the SF Bay Area.

Related to the first change, was leaving my job. I had to finish a few tasks and then document my job so I could pass it along to someone else. Documenting what you know is not as easy as it sounds. I also had to spend some time out-processing from the service. It takes paperwork to get in the service, and it takes even more to get out.

The final and biggest change was moving from Dayton, OH, back to the SF Bay Area. Getting the house ready for moving and getting it ready to sell took a while. I had to do some painting, replace a few doors (one cracked and one warped), patch some mortar on the brick outside of the house, and a few other household chores.

This all left very little time for hobbies. About the only time I used the QL was writing cover letters and printing Resumes. And since the move my access to the Net, esp. USENET has been limited.

I am waiting for my house to sell in Ohio, so I moved into an apartment. This meant that I had to put a number of household goods in storage. The movers did not do a good job of putting the right stuff in the right boxes so I could get what I needed off the moving van and put the stuff I did not need in storage. This meant that my QL is with me, but the disk drives, power supply, mouse, and modem cable are in storage. I've had to borrow disk drives, a PC power supply, and a QL power supply to get the QL up and running. I still have to make a modem cable. I'm using my Z88 for my telecomm needs, and it's tough finding an Internet Service Provider that supports 8 lines of display (real tough). Once I get a modem cable built I should be able to read comp.sys.sinclair.

Speaking of the Z88, most of this issue has been written on the Z88 while riding BART (the local commuter rail system) to work. I have about a 50 minute BART ride, so I have lots of time to put to good use.

And also speaking of work, I am now working for a

company in Berkeley called Project Technology. They were founded by Sally Schelor and Steve Melor, creators of the SM Object Oriented Analysis Method. My job is to maintain the Sun UNIX boxes and the PC's.

While I've been busy doing non-QHJ things, I noticed that no one sent me e-mail asking where the next QHJ issue was. I'm not too sure if this is a good sign or not. Granted it was nice not to be bugged, but then I have to wonder if the QHJ was missed.

One thing you will notice with this issue is the number of articles with no code. I have not had the time to sit and code at the QL, so I've written some articles and covered what code was necessary with pseudo-code.

Well, that's about enough for me. Oh, since I have just moved, please note the new snail mail address, but don't write it down in ink. I hope to buy a house sometime around the March or April '97 time frame. Here now the newsletter.

Exclusive OR Encryption

I've always been interested in encryption. Keeping my files safe from prying eyes has been more of a want than a need. Plus encryption is a neat programming problem to solve. Many years ago I wrote a program called QL Crypt that was my first look at encryption. In QHJ XX there was Complex ASCII Rotation (CAR) that was aimed at encrypting mail messages just enough to make them secure from casual observers. There are many other ways to encrypt files, each with it's own level of safety.

Encryption is based on two parts, the Method and the Key. The Method is what various computations are performed to get from the clear text to the encrypted text. This is equivalent to a lock. The Key is the chunk of data used to make one encryption different than an other. Since the encryption Method does not change, it is the Key that makes your text encrypted different from somebody else's. This is the equivalent to, well, a key. A specific model of lock is manufactured into a thousands of individual locks. These locks all look and work the same. It is the key that makes each one secure and different from the others.

There are many methods used in encryption, from the very easy to break, to the damn near impossible. The harder to break, the more computation necessary to encrypt. If you are worried about wasting computational cycles, then you need only implement the Method that secures the information to the level you need it. Securing a Christmas gift list is different than securing company trade secrets.

QL Crypt and CAR both used a character rotation Method for encryption.
As each character was read in, a value of 1-4 would be added to their character value (CHR$), based on the Key, and then output to the resultant file. QL Crypt allowed the encryption of binary files, CAR stayed with pure ASCII text so that it could be sent in e-mail.

Each one of these Methods, and many more, require the use of two functions that are the opposite of each other. In character rotation, a value would be added to encrypt, and subtracted to decrypt. What ever gyrations you go through to encrypt you must reverse to decrypt. Exclusive OR encryption does not have two opposite functions because Exclusive OR is the opposite of itself.
Exclusive OR (XOR)

Bit 1	Bit 2	XOR
0	0	0
1	0	1
0	1	1
1	1	0

When using Exclusive OR with a bit pattern, what you XOR it with is usually called the Mask. To show you how XOR is the opposite of itself let take a look at the binary pattern 010110 XORed with the mask 111111.

Bit	Mask	XOR	Bit	Mask	XOR
0	1	1	1	1	0
1	1	0	0	1	1
0	1	1	1	1	0
1	1	0	0	1	1
1	1	0	0	1	1
0	1	1	1	1	0

Notice that after XORing the bit pattern with the mask and then XORing the resultant bit pattern with the mask the original bit pattern returns. This means that writing the program to implement XOR encryption does not require the writing of an encryption routine and a decryption routine, only one is XOR routine is needed.

The Mask that is used in the XOR routine is derived from the Key. How secure you data is, is dependent on the Key and its length. If you use a Key of length one (1 byte) then it would take only 256 tries to break the encryption. The longer the Key, the more tries necessary to break the encryption.

QL Crypt used the random number table in the QL as the key. A password was ENTERed from the user, which then was used as the seed value for the random number table. This makes for very strong encryption (as the random number table is fairly large and makes a long Key), but it make it impossible to port to other platforms. Even differences in QL ROMs could cause the program to fail.

CAR used a ASCII password ENTERed by the user. This makes the program very portable, but also makes it a weaker form of encryption. If the user typed in a fairly long password, then the level of security would go up.

Constructing a Spell Checker

A spell checker is usually comprised of two parts:

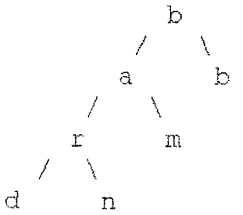
1) word lookup (to see if a word is spelled correctly)

2) word suggestion (to suggest the correct spelling of the word). Past issues of the QHJ have looked at different algorithms to tell how close two words are, a key part of word suggestion. This article will focus on word lookup.

The key thing to decide in creating the word lookup algorithm is the data structure for storing the words and quickly looking them up. If the word list was fairly short, a brute force method would work. Since most spell checkers will need a word list in the tens of thousands, the lookup algorithm will need to be smarter. We also need to keep in mind that the words will be of many different lengths.

At first the most obvious data structure would be a tree structure. A word would walk down the tree structure

letter by letter. When it reached the end of its length it would check the current tree node to see if it is a valid word. Let's take a look at three words, bar, bard, and barr, and the following tree structure.



With the word BAR, the B is valid, with leads to an A which is valid and it leads to an R which is valid. The R node will have a value of 1 to signify that it is the end of a valid word. This way the structure can parse both BAR and BARN and distinguish between the two. When parsing BARR, the B is fine, which leads to A, which leads to R, but now there is no R path in the tree and the word is determined to be invalid.

The problem with this data structure is two fold: one, you need to construct it out of the dictionary file at run time, which can take some time, or you need to find a way to store it so it can be read in easily. The second problems is that the language we are going to construct the spell checker in is SuperBASIC, which does not easily support making tree structures. They are easily created with C structures or Pascal records.

We could use a hashing algorithm since it is designed for very quick look up, but with a very static list of words, our hashing algorithm may require more data space than we really need.

We need to come up with some data structure that is tailored to our needs. One that will provide a fairly quick look up and minimize on the data space needed to store the word list.

Here is a suggestion: Store the words in a flat array. The words will be pre-sorted on disk, first by the length of the word and then alphabetically. This means that all of the two letter words will be grouped together and sorted alphabetically, then the three letter words, etc. Word length is one way to distinguish one word from an other.

Create a two-dimensional array called start_array(x,y). The X value will be LENGTH and the Y value will be FIRST_CHAR. As the words are read in, the array will be used to keep track of where the first 2 letter starts in the array, where the first three letter word starts, and so on. It will also keep track of where words start by the first letter. When you need to do a lookup of the word BAR, LENGTH is 3, FIRST_CHAR is equal to B, so you would look up start_array(3,'B'). this will return where the first 3 letter word that starts with B is stored in the word array. From there the search can be a simple brute force search that compares all three letter B words to see if they match BAR.

To determine where the search should end, you will also need to know where the first three letter C word is at. This can also be looked up in the start_array. Below is a little pseudo code showing how this would work.

```
start = start_array(3,'B')
stop  = start_array(3,'C')

FOR x = start TO stop
  IF word_array$(x) = BAR THEN EXIT success
NEXT x
EXIT fail
```

Surfing The Net With The 2068

On Addressing The Internet, Using The Timex-Sinclair Model 2068 *by David Lassov*

In this article, we discuss several services, provided to us in subscription form, by a computer, that speaks UNIX.

We have something to say about telnet, email, mailing lists, the web, usenet, gopher, and ftp.

After using telnet to establish computer contact, the rest of those *programs* communicate off-line. ON-LINE communications (in real time) use talk, irc, or muds.

First, we use the telephone, to CONNECT with our Internet provider, in order to show the UNIX prompt, "$", on the screen.

TELNET

Telnet is a facility, so fundamental and so old in the history of accessing computers, as to *answer the phone* whenever we make our *initial* call to the Internet service. Then, of course, Telnet serves to CONNECT us to whatever *other* computers on the Internet, that we desire to talk to.

Boy, this must really **kill** the guys at the telephone company, as they try to get a piece of each such action! Here is how it goes for me. I call 520-806-4700, which responds with "azstarnet" and a request for a **user name**. After that, it asks for my **password**. Lastly, it asks for the computer I want to work on, since Arizona Starnet has a lot of computers. After "connect" appears, the banner/main menu is displayed.

Should I type "telnet user-name@computer-name", then a brief pause ensues, based upon Internet traffic, followed by a response with site-name and a request for a **user name**. After that, it asks for my **password**. Lastly, ... , as above. From the foregoing, *you* should see, that using Telnet is like calling a BBS, e.g., SOL BBS at 520 882 0388 with "**guest**" as a user name and "**guest**" as a password.

By a careful reading of the above, you should also see, that each TELNET site differs in log-on procedure, as much as it differs in general content. This includes the initial call to your Internet service!

Anyway, by going through the above steps, you have gained **access** to the Internet and/or **access** to whatever other site on the Internet, you might have addressed.

E-MAIL (Electronic Mail)

We use program MAIL, in order to SEND mail over the Internet, using the 2068 computer and a shell account,

in order to access the web. I don't know all the details, but MaxCom software does not seem to entirely emulate the VT100 terminal, because we cannot go UP on the screen and, hence, we are limited to **line editors**.

Shell accounts usually use "PINE" and "PICO" to send mail but, alas, they use full-screen editors. But, they replaced "mail", which has been left as a rather efficient line editor, and "mail" sure does a good job!

Suppose we are looking at the UNIX prompt, "$", on the screen. Then, we type "mail user-name@computer-name", in order to set up the computer, for SENDing the message which follows, to the user with user-name "user-name" at the computer, bearing the name "computer-name"

Next, my cursor jumps to the start of the next line, which is *blank*, of course (no full-screen editor!). I enter the message, line by line (back-space editing **only**). I terminate the message, by typing **only** "." on a line and pressing ENTER. The message can also be terminated, by typing ^D or ^d on a blank line, **where ^ denotes first pressing the CONTROL key**, (CAPS-SHIFT/EDIT on the 2068 with MaxCom). When the UNIX prompt $ consequently appears, the message will have been SENT to the addressee, user-name@computer-name.

Now, in order to check for your own email, simply type "mail" and press ENTER. A response of NO MAIL means an empty mailbox. Otherwise, "FROM: ..." will appear, followed by any first email message in your mailbox.

After listing an email message to you, the UNIX prompt $ will appear. This initiates a reply, should you type

" r "

and press ENTER. This also **deletes** that particular letter from your mailbox. In order to **delete** the letter **only** (without a reply,) then simply type "d" after the UNIX prompt.

MAILING LISTS

These are something we can join, in order to keep our electronic mailboxes filled with interesting stuff.

For example, open your download buffer, in order to get an ASCII copy of the following session, where you get the UNIX prompt onto the screen, and then ENTER the line:

http://scwww.ucs.indiana.edu/mlarchiv

Don't forget to close the download buffer, when finished!

It contains information on how to join (or leave) mailing lists, each devoted to a specific special interest group.

Whenever a member submits email to the mailing list, then it is immediately sent to **all other** members of the group.

So, all you need to know is how to send and receive email. Also, the address of an interesting mailing list to talk with, would be helpful. :-)

FTP - File Transfer Protocol

"ftp" is the name of the UNIX program, for implementing FTP. First, get the UNIX prompt "$" on the screen. ENTER "ftp" alone, followed on the next line by "open rtfm.mit.edu". This last will be in response to the ftp prompt, "ftp>", resulting from the initial entry of "ftp". Alternatively, we can connect to the remote host, "rtfm.mit.edu", by ENTERing the line:

ftp rtfm.mit.edu

The ftp facility can be terminated, by typing "quit", in response to any ftp> prompt.

Use the "get" command, to download any file to your current directory.

Of course, you should already have set up a directory on the UNIX system, where you store your downloaded files. Do this, BEFORE you use ftp to access the remote directory. Furthermore, there are simple commands like "cd", to change to the desired remote directory.

Now, we can up- and down-LOAD all kinds of files, as the Internet machine with UNIX is a bit more sophisticated than our 2068 system.

Just be aware, that downloads to **our** 2068 system are limited to ASCII transfers.

USENET(news groups)

The UNIX program for accessing USENET is called "tin". Now, if you just ENTER the name "tin" then would follow an endless sequence of questions, on subscribing to new news groups, each question demanding a YES or NO answer, followed by an identical question !! So, here is what we do:

At the UNIX prompt, "$", ENTER "tin -q". This will bring up a menu of ALL news groups, which you have used. You can enter any news group on the list, by ENTERing its line number from the list, followed by another ENTER. We escape back to the last menu, by ENTERing "q". We can keep ENTERing q's like this, till we reach the UNIX prompt.

At the UNIX prompt, we can also choose to read a specific news group, say "alt.1d" on one-dimensional figures, by ENTERing the line "tin -q alt.1d" and, **yes**, the space(s) following "tin" are critical!

The important thing is the ability to arrive at the UNIX prompt, "$", on the screen. While this is more complicated, than lifting a telephone receiver for the dial tone, this is still a simple task, costs about $20 monthly, and requires the advice of your Internet service provider. So, when signing up for Internet access, be sure to keep track of the telephone number of the SYSOP (system administrator!)

GOPHER

Let's explore gopherspace! Sounds like the underworld, doesn't it! To do this, we call on a UNIX program, called "gopher"

While looking at the UNIX prompt, "$", we can type "gopher" and then press ENTER. This will access any local gopher site, as set up by the SYSOP. In order to access a specific gopher site, say wiretap.spies.com, then enter the line:

gopher wiretap.spies.com

Up comes the MENU, most of whose items refer to other Menus. So, choose an item, by ENTERing its line number, or by pressing the space key, or space bar, till the item is displayed at screen bottom. Then, enter the item,

by pressing ENTER.

After thus searching the Menus for your particularly interesting item, then enter the item, by pressing ENTER. Next, program "gopher" will fetch your topic and display the text on your screen, one page at a time.

So, you can spend all day (or night!) exploring the underworld of gopherspace, using only six basic commands: "k" (or ^P) and "j" (or ^N) to move UP and DOWN within a menu, respectively; ENTER and "u" to move from one menu to the next or previous, respectively; and SPACE (or > or +) and "b" (or < or -) to page forward and backward through long Menus, respectively.

Should we get lost amongst all these Menus of Menus, we can always type "m", to escape to the initial menu!

At the UNIX prompt, "$", we can escape back to the Internet main menu, by typing "stop" or ^D. We terminate the session, by escaping the Internet with ^C at the main MENU!

THE NET

The net is man's latest attempt at a universal communication system.

After using the phone to connect to an Internet provider (like using TELNET), mailing lists offered the first such attempt. Then, USENET followed with a little better access to the web, in order to support newsgroups of common interests (like using message bases and BBSs.) The gopher system improved on those capabilities a bit with menu-driven access (like Menus of Menus of ... .) Then, the World Wide Web (www) was developed at Cern in Switzerland, to access ***massive*** amounts of Physics information. Thanks to Marc Andreesen and his program, MOSAIC, the www degenerated into THE WEB: A **complete** information system with links, to permit EASY jumping from ideas to words to pictures to sounds ... . Now, Goedel's Theorem, that **completeness** is tantamount to **inconsistency**, is surely applicable here, as there is little consistency in the NET.

LYNX is the program, used to access the web from a shell account. It runs on the Internet computer and furnishes all the above words and ideas of the web.

Be that what it may, we presume, that we are looking at the UNIX prompt, "$", on our screen, CRT, or monitor. If you simply type "lynx" and press ENTER, then you should get the banner for your local Internet system, that you are now using. In order to get access to somebody else's site, you have to type their user-name@computer-name, *after* typing "lynx " . Of course, it is important to separate "lynx" from "user-name@computer-name" (by spaces.)

The above procedure should result in any site's banner and/or main menu.

TALK

The talk facility is implemented by the UNIX program, "talk"

Usage is the same as SOL BBS in TALK mode or in TERM mode. Some people refer to this interchange of ASCII information as CHAT mode. The other person needs a talk facility, which is compatible with the UNIX "talk" program. It also helps, that they are at the computer, addressed on the Internet. :-)

Programs for talk, which are compatible with UNIX "talk", are available on the Internet for download at no cost, using anonymous ftp. ENTER the following line :

talk user-name@computer-name

in order to connect (for free) to the person, using user-name "user-name" at the computer "computer-name"

If the person is **there and not busy**, then he or she will be paged and asked to respond with a like talk command, using our user-name and computer-name. Connection follows, and you can both begin talking.

If the person is **there and busy**, then [Ringing your party again] will appear on our screen every ten seconds, till either connection is established or we press ^C. Before we try to talk to someone, using the talk facility, always "finger" them with the line :

finger user-name@computer-name

The information from finger should tell us, whether the person is logged-in and willing to talk.

The conversation can be terminated, when someone hits ^C.

Then, the UNIX prompt, "$", reappears.

These are like FREE phone calls, all over the world!

INTERNET RELAY CHAT

This is an ultimate TALK facility, talk, talk, talk,..., talk. Once on board, everything you type is printed to everyone else's screen, and you see everything typed by everyone else!

Private messages, can be sent and/or received to/from any on-line user. For a list of the (thousands of) users, on-line, type /LIST.

Anyway, in order to access this facility, get the UNIX prompt, "$", on the screen, and ENTER "irc"

My local access is to EFNET, which has users from over nineteen countries (foreign languages!)

For example, there is a guy from downtown Belgrade, Yugoslavia, broadcasting on student activities there. He uses an irc channel. Also, some guy is listed as "silversto", which is my birth name. Wonder what's on his mind ... ! Most exchange is in English, but I saw some Spanish lingo in the LIST.

MULTI-USER DUNGEONS

A MUD is a game program. No, it's much more, since it provides a game environment among several players. That's how muds are all the same. Mud's are all different, by providing different environments, relating the players ... differently! You are going to have to ask your friends, about which ones to choose.

HINTS

Three hints will make life a lot easier at the keyboard of our 2068's, when accessing the Internet.

1. Get the UNIX prompt, "$", onto the screen. Then, ENTER the line:

stty erase ^H

This will set the description of our TTY, to accept the 2068 DELETE of CAP-SHIFT/ "0", whereas the UNIX system is looking for a DEL character, such as generated by DELETE on my APPLE II C+.

2. Describe the screen width of the 2068 system as : stty COLS 63

3. Similarly, set the screen length with : stty ROWS 18

When I get $ onto the screen, the FIRST thing I do is item #1, above. If I make typing errors, and the backspace is the ONLY device available to **line editors**. Hints #2 and #3 are useful, only when I want to READ the screen, page by page.

PARALLEL I/O MODIFICATION

by Al Teng

A few years ago, MIRACLE SYSTEMS redesigned their parallel printer interface so that its circuitry now fits safely within the confines of what would appear -- from a distance -- to be a standard, metal CENTRONICS plug.

Oh, how I wish this had been the original design. I don't know what your experience was with the older style parallel interface, but if it was similar to mine, then you probably had the misfortune of breaking the blue-plastic, CENTRONICS plug away from BOTH the black box AND the circuit board!

Okay, the misfortune means one of a few things:

1) I am clumsy; AND,
2) my printer is NOT well situated; and/or,
3) the design is unintentionally fragile.

After "breaking" my parallel interface for the umpteenth time, I finally decided that it was time to find my ohm-meter, warm up my 15 watt soldering iron, and make a short adapter cable that separated the CENTRONICS plug from the circuitry.

After opening the interface box and looking at the short jumpers I had previously employed to RE-connect the CENTRONICS plug to the circuitry, it occurred to me that I might as well make a hard wire connnection directly between the circuit board and a standard, 25-pin female D-subminiature plug -- the same connector used on the ISA boards of IBM computers for parallel circuitry. Using an "IBM" connector would mean that I would be able to use any length, readily available extension between my QL and the printer.

NOTE: If you are not confident of your soldering skills in tight areas then consider making a non-invasive, adapter cable. Also, neither I nor ZQA! take responsibility for the end results of any hardware modifications that you might make.

For conceptual clarity (?) the following shows the "front" view (i.e., the working end) of the CENTRONICS plug, and the "rear" view of the 25-pin D-connector where you will make your solder connections. In other words, you will be connecting pin-1 of the CENTRONICS plug to pin-13 of the D-connector; and, so on. Note that you will only be making eleven (11) connections to the D-25 plug since there are only that many signals being used by the MIRACLE parallel interface.

CENTRONICS plug: ➔ 1 2 3 4 5 6 7 8 9 t 1 2 3 4 5 6 7 8
[front view]

A B C D E F G H I o J o o o o k k o

K o o o o o o o o o o o o o o o o o

25 female plug : ➔ 13 d h t 9 8 7 6 5 4 3 2 1 [rear view]

A B C D E F G H I o J o o

o o o o K o o o o o o o

Connect 'A' to 'A', 'B' to 'B', and so on.

Note that I ran a jumper between the 'K' pin on the lower row of the CENTRONICS plug and the double 'k' pins on the upper row of the same plug.

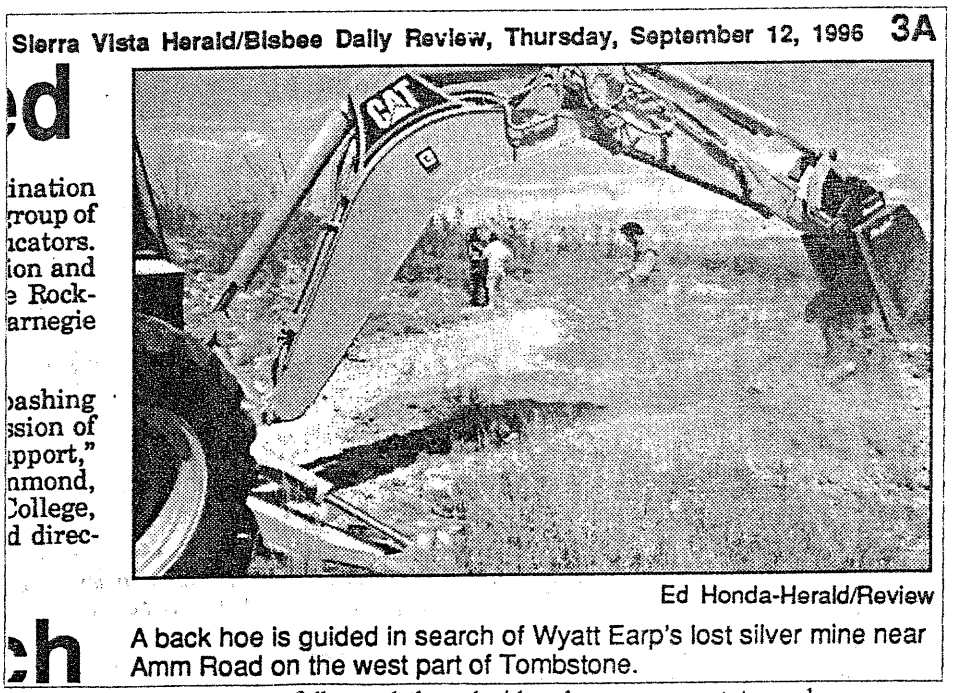
I used a solder-type D-connector and eleven short (about 6" long) pieces of multi-strand wire.

If you are simply making an "adapter" then you may note that using IDC (ribbon-type) plugs should be much faster -- only the ground ('K') connection needs to be "off-set" with a jumper.

If you are hard-wiring, look at the circuit board carefully, and then decide where you want to make your connections -- I chose to hard-wire directly to "pins" on the circuit board -- visually tracing back from the CENTRONICS plug to the first available pin. A hard-wire implementation will minimize components.

I twisted the wire together (loosely) and then wrapped the cluster (tightly) with electrical tape.

Finally, I used my soldering iron to melt-away a small "cut-out" in the back edge of the base of the interface's black plastic box so that my short pig-tail adapter could exit



Sierra Vista Herald/Bisbee Daily Review, Thursday, September 12, 1996 3A

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A back hoe is guided in search of Wyatt Earp's lost silver mine near Amm Road on the west part of Tombstone.

the opposite end of the repaired CENTRONICS plug. Take your time (test fit often), and don't make the hole too large.

Since my QL's components are nestled inside a salvaged PClone case, my old style, MIRACLE parallel interface can now rest near the back of the case (on the inside) out of harm's way with the 25-pin connector firmly attached to the rear of the case using an available opening intended for this type of connection.

I can now employ ANY LENGTH of any "standard" IBM printer interface cable to complete the connection of my QL to my printer (long IBM-type parallel printer cables tend to be much cheaper than a CENTRONICS-to-CENTRONICS cables of equal length; and certainly, easier to find in a store).

With a little effort on your part, you can add the same flexibility and durability to your MIRACLE parallel printer interface.

HAPPY TRAILS,
AND COMPUTING, TO YOU ...

QLUTter_BAS

by Al Feng

Utility programs vary widely in functionality. Some utility programs are single task while others are multi-task. Some simply deal with file handling while others deal more directly with the storage medium. QLUTter_BAS is a simple, six function, SuperBASIC front-end and utility program designed to help you un-clutter the files of your QL's various storage media.

QLUTter can be used to EXEC_W a program, COPY a file from any valid medium to another, DELETE files, PRINT files, FORMAT media, or VIEW a file's contents. QLUTter can handle over 600 files utilizing a multi-screen display. QLUTter's only system requirement is that the storage media can not be write-protected.

QLUTter_BAS can be compiled and used within QRAM or TASKMASTER.

{Key} INPUTs

The primary utilities are accessed by the appropriate FUNCTION-key indicated in the legend a the top of the screen. The specific file is selected by keying the {'prefix-symbol'} which precedes the filename.

The principle key inputs are as follows:

(esc) QUIT: QUITs procedure / program
F1 COPY: Copies files from any drive to any other.
F2 de-FILE: Selectively DELETEs a file from a drive.
F3 HARD-COPY: LLISTs programs / LPRINTs ASCII files.
F4 FORMAT: FORMATs a medium in any drive.
F5 pre-VIEW: Views a file's contents.
{ } operand: prefix selects file.

FLIST_imp

The "FLIST_imp" file is created by the program to keep track of the contents of the medium. The "FLIST_imp" file can be IMPORTed into Quill to provide a formatted, hardcopy record of what is on each medium.

SELECT_DEVICE '0'

PRESSing '0' (zero) accesses the 'SELECT_DEVICE' facility without going through the QUIT sequence. If you simply wish to change from 'flp1_' to 'flp2_' then you do not have to use the 'SELECT_DEVICE' sequence.

If you have immediate access to 'flp1_' and simply wish to access 'flp2_' then simply use the 'right cursor' key.

Similarly, if you have immediate access to 'flp2_' and simply wish to access 'flp1_' then simply use the 'left cursor' key.

If you wish to access a device other than 'flp1_'/'ram1_'/'mdv1_', then press 'o'/'O'. In addition, you may use:

'g' for 'flp2_'
'm' for 'mdv2_'
't' for 'ram2_'
'w' for 'win1_'

To use the '[O]ther' choice, first press 'o'/'O', then input the three letter "name" of the device, then press the 'ENTER' key, and then the number of the device, followed by pressing the ENTER key.

To access 'flp3_' from 'flp2_' via the cursor keys, you must use a 'shift right_cursor' key combination.

To access 'ram1_' from 'flp1_' via the cursor keys, you must use a 'ConTRoL left_cursor' key combination.

(shift)[Function Key]

A 'shift [Function Key]' combination MAY be used whenever a source disk/tape is changed instead of SELECT_DEVICE. Thus, if you have a keyboard with ten function keys, you may use 'F6' for a new source disk in the 'COPY' utility; 'F7' for 'de-FILE', and so on.

CHANGE SERial ["]

If your printer is attached to 'SERial 2' or you want to send the file over 'SERial 2' (no guarantees) for some reason, then you can "toggle" this option by PRESSing the double quote (shift ') sign after you have accessed the 'HARD-COPY' routine.

COPY ... [F1]

QLUTter allows for selective COPYing of files from (m)any source disk(s)/tape(s) on your QL to any other destination medium on your QL. For example, you can copy from 'ram3_' to 'flp1_'; from 'flp1_' to 'mdv1_'; or any other source/destination combination you may choose.

When you access this facility, you will see a FLASHING CURSOR near the top of the screen. You must respond to it by PRESSing either the 'ENTER' key for the DEFAULT (i.e., 'flp2_' for 'flp1_'; 'flp1_' for 'flp2_'; et cetera -- the DEFAULT device will always be a like storage medium); or, 'f', 'm', 'r', or 'o' (CAPS allowed), and then 'ENTER' to indicate your choice.

For SOURCE drives whose numerical value is greater than '2' the DEFAULT DESTINATION number will be one less than the drive number being accessed.

If you select 'o' (OTHER) as your choice, you can input a single letter for standard devices, otherwise for non-

standard devices such as on a NETwork you must INPUT three valid letters indicating a device in your system, and then PRESS the 'ENTER' key followed by the number of the destination device, and the the 'ENTER' key again. This will be the TEMPORARY DEFAULT device until you exit the utility.

de-FILE ... [F2]

"De(lete)-FILE" allows for an alternative method of un-cluttering your disks. Use the 'pre-VIEW' utility ('F5') to scan the file if you are uncertain about its contents.
You will be asked to VERIFY ('y'/'n') prior to file DELETion.

HARD-COPY ... [F3]

"HARD-COPY" allows you to send the selected file to your printer.

QLUTter recognizes Quill's "_doc" prefix and will generate roughly formatted output.

Because QLUTter recognizes some CONTROL CODES, and because SuperBASIC LLISTings do not have LINE_FEEDs the hardcopy output of SuperBASIC programs will be difficult to read.

If you want a hardcopy LLISTing of any type, then it is recommened that you first IMPORT SuperBASIC/Archive/etc. programs into Quill (you will have to add a three letter extension to the name of the file whose core name cannot be longer than eight characters) and generated an appropriate "_doc" file by SAVing the IMPORTed program.

Output can be sent to either SERial port by toggling the double quote key.

FORMAT ... [F4]

"FORMATting" can be done on any standard medium; but, exclusion has been made for "win()_" devices to prevent unintended accidents.

If you select the wrong device, the enter a name LONGER THAN 10 (ten) characters, and this will allow you to re-select or (esc)ape.

pre-VIEW ... [F5]

The 'pre-VIEW' function allows you to view the raw contents of a file without having to LOAD it. SuperBASIC programs will appear as a LLISTing; machine code will be mostly unintelligible, non-ASCII characters; and, a Quill_doc will be displayed with breaks between paragraphs to make reading the file easier (in rare instances, the display will abort after the header and the file contents will not viewable).

THE LLISTING

The QLUTter_BAS is actually a stripped version of an older version of the QLUSTer SuperBASIC source program.

You can get a sense of how the program shares non-specific functions by comparing the mA/xp/df/hd/lk PROCedures. For example, you could change the 'FORMAT' utility to an 'UN-ZIP' utility by having the 'rf' PROCedure mimic the 'mA' PROCedure with the exception that the active line would read something like the following:

If k<c then EXEC_W ram8_unzip;""&t$&w$&"_"&ZIP$(1 to len(Zip$)-4

where the unzip program has been previously located in RAM8_.

Of course, before attempting modifications to the program, you should use the program as it is LLISTed.

ERROR handling is problematic and if you find the program hangs (as on a bad medium) then you may want to eliminate the "WHEN ERRor" statements from the 'sx','xp','rf', and 'cj' PROCedures.

Because the QLUTter_BAS LLISTing now exists as a stripped version of the QLUSTer utility, many of the PROCedure names may seem cryptic. Despite what it says in some compiler manuals, the length of the PROCedure names, string names, and variable names does affect the ultimate size of a compiled program.

In lieu of REMarks, please note the following explanations for the program's PROCedures:

PROCedure	FUNCTION	LINE NUMBER
rz	re-window	250
Wz	re-window	260
yeano	yes-or-no option	280
B5	beep	340
wx	wrong key message	360
ix	invalid drive message	370
dN	duplicate name message	380
ERmsg	invalid medium message	390
esc	escape message	400
PC	press key message	410
CLSc	clear partial screen	430
CLSd	"	440
CLSe	"	450
CLSo	"	460
rCLS	reset & clear screen	480
zCLS	CLS	500
T	top menu bar	520
sx	access device	540
sw	show device	640
FI	dynamic file name(s)	720
Rx	rest of menu screen	730
rx2	bottom of menu screen	800
Uu	redirect [pseudo loop]	820
Uv	"	830
Uw	"	840
pk	keypress	860
k3	keypress monitor	910
mA	main menu / EXEC_W	1170
xp	COPY utility	1230
df	DELETE utility	1390
hd	PRINT utility	1480
rf	FORMAT utility	1580
rf2	" subroutine	1610
other	" "	1830
fmat	" "	1910
key3	keypress monitor	2030
lk	VIEW utility	2120
L2	" subroutine	2210
L3	" subroutine	2330
L4	" subroutine	2420
lne	COMMAND_BAR	2510
nd	" "	2520
CL	" "	2530
K4	keypress monitor	2550
Pick	TAB/shift-TAB	2610
NxtW	move command strip	2670
PrvW	" " "	2690
cj	change DEVice	2790
NUT	Next Utility	3040

Graphic commands such as LINE are not used since BLOCK draws to the screen much faster and in a more

consistent manner.

SUB_DIRECTORIES

QLUTter does NOT handle sub_DIRectories; but, there are many front end programs such as QLUSTer and QLAMBer which can easily access sub_DIRectories using the same single_key design utilized by the QLUTter program.

HAPPY TRAILS,

AND COMPUTING TO YOU ...

```
100 REMark
****************************************
110 REMark *QLUTter_BAS 3.701 @ 1988-97*
120 REMark
****************************************
130 :
140 MODE 0: POKE 163890,0: REMark CAPSON
150 u$=" QLUTter 3.701: "F$="_FLIST_imp"
160 t$="flp": a=1: j=1: D$="ser1":pj=1:pn=7
170 "BLANK$="            ": REMark 12 spaces
180 :
190 WINDOW#2,512,256,0,0:BORDER#2,1,7:
PAPER#2,7:INK#2,0:zCLS
200 WINDOW 462,250,25,3:BORDER 1,7: PAPER 7
210 WINDOW#0,413,10,50,241: PAPER#0,7:
INK#0,0
220 OPEN#3,scr_458x200a27x48
230 :
240 AT#2,21,4: PRINT#2,u$;" by Al Feng "\TO
3; " @ 1997  PLATYPUS Software ": FOR y=0
TO 5: AT#2,22,10: PRINT#2,y: PAUSE 10: NEXT
y: END FOR y: PAUSE 40: tre=0: WCh
250 DEFine PROCedure rz: WINDOW#0,413,10,
50,241:PAPER#0,7:INK#0,0: END DEFine
260 DEFine PROCedure Wz: WINDOW
462,250,25,3: END DEFine
270 :
280 DEFine PROCedure yeano: PAPER#2,7:
REPeat ysn
290 c$=INKEY$
300 IF c$=CHR$(27) OR c$=="n" THEN ok=0:
EXIT ysn
310 IF c$=CHR$(10) OR c$=="y" THEN ok=1:
EXIT ysn
320 END REPeat ysn: END DEFine
330 :
340 DEFine PROCedure B5: BEEP 900,20: PAUSE
5: BEEP 900,40: END DEFine
350 :
360 DEFine PROCedure wx: AT#2,24,37:
PRINT#2, "wrong key": B5: CLSd: B5: END
DEFine
370 DEFine PROCedure iX: AT#2,24,35:
    PRINT#2,"invalid drive": PAUSE 10:
CLSd: END DEFine
380 DEFine PROCedure dN: wx: AT#2,24,35:
    PRINT#2,"duplicate name": PAUSE 30:
CLSd: END DEFine
390 DEFine PROCedure ERmsg: CLS#0: wx: iX:
AT#2,24,35:
    PRINT#2,"media problem": PAUSE 10: iX:
END DEFine
400 DEFine PROCedure esc: AT#2,24,35:
    PRINT#2,"(esc) to abort": END DEFine
410 DEFine PROCedure PC: CLSd: AT#2,24,27:
    INK#2,0: PRINT#2,"Press [Any_Key] to
CONTINUE": PAUSE: END DEFine
420 :
430 DEFine PROCedure CLSc: BLOCK
458,225,0,10,pn: END DEFine
440 DEFine PROCedure CLSd:
BLOCK#2,330,10,83,240,7: END DEFine
450 DEFine PROCedure CLSe: BLOCK
458,194,0,41,pn: END DEFine
460 DEFine PROCedure CLo: PAPER#0,pn:
WINDOW#0,402,11,81,34: CLS#0: END DEFine
470 :
480 DEFine PROCedure rCLS: Wz: BORDER 1,5:
END DEFine
490 :
500 DEFine PROCedure zCLS: BORDER#2,1,7:
CLS#2: END DEFine
510 :
520 DEFine PROCedure T: BLOCK 26,9,432,0,7:
PAPER 7: AT 0,0: INK 0: PRINT"    [F1] COPY
[F2] de-FILE  [F3] Hard-COPY  [F4] FORMAT
[F5] pre-VIEW": BLOCK 458,1,0,9,5: : BORDER
1,5: BLOCK 458,2,0,235,5: BLOCK
458,12,0,236,7: PAPER 5: INK 0: END DEFine
530 :
540 DEFine PROCedure sx: DIM Z$(610,32):
DELETE t$&a&F$
550 WHEN ERRor
560 ERmsg: CLS#2: tre=0: WCh
570 END WHEN
580 OPEN_NEW#6,t$&a&F$
590 DIR#6,t$&a&"_"&RN$: CLOSE#6
600 OPEN_IN#7,t$&a&F$: FOR c=0 TO 610
610 IF EOF(#7) THEN EXIT c
620 INPUT#7,Z$(c):END FOR c: CLOSE#7: c=c-
1: IF c/76<=(j DIV 76)+1 THEN pj=(c DIV
76)+1 AND j=(pj-1)*76+1: END IF : END
DEFine
630 :
640 DEFine PROCedure sw:IF a<=8 THEN g=a-1:
    IF a>=1 THEN h=g+2
650 IF g=0 AND t$="flp" THEN LET t1$="ram":
    ELSE t1$="flp": END IF : g1=1
660 IF g>0 THEN t1$=t$: g1=a-1: END IF
670 f=c-1-76*(pj-1)-76: IF f<=0 THEN f=0:
END IF
680 PAPER pn: INK 4: AT 1,73: PRINT" ": AT
1,55: INK hCR: PRINT" page ";: INK mCR:
PRINT pj;: INK hCR: PRINT" & ";: INK mCR:
PRINT f&"+";: INK hCR: PRINT" files  ": AT
1,1: INK mCR: PRINT"(esc) ";: INK hCR:
PRINT"EXIT": INK mCR: AT 3,14: PRINT
BLANK$;BLANK$(1 TO 4)
690 AT 3,14: PRINT Z$(0)
700 AT 3,57: PRINT Z$(1);BLANK$(1 TO 4):
    THEN INK 2: AT 1,31: PRINT FREE/1024;"
K";: INK hCR: PRINT"ilobytes": END IF : END
DEFine
710 :
720 DEFine PROCedure Fi:
PRINT#3,"{";CHR$(n+e+48); "} ";Z$(n+e+j):
END DEFine
730 DEFine PROCedure Rx: INK#3,mCR:
PAPER#3,pn: AT 3,9: PRINT t$;a;"_": FOR e=0
TO 18
740 FOR n=1+e+e+e: AT#3,e,0: Fi
750 FOR n=2+e+e+e: AT#3,e,19: Fi
760 FOR n=3+e+e+e: AT#3,e,38: Fi
770 FOR n=4+e+e+e: AT#3,e,57: Fi
780 NEXT e: END FOR e: rx2
790 END DEFine sw
800 DEFine PROCedure rx2: PAPER#2,7:
AT#2,24,5: INK#2,0: PRINT#2,CHR$(188);" ":
    BLOCK 2,13,18,235,5: AT#2,24,8:
INK#2,2:
    PRINT#2,t1$&g1;"_"TO 71;t$&h;"_":
AT#2,24,78: INK#2,0: PRINT#2,CHR$(189);" ":
```

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    BLOCK 2,12,436,236,5: END DEFine
810 :
820 DEFine PROCedure Uv: CLSe: sw: Rx: k3:
pk: END DEFine
830 DEFine PROCedure Ux: IF cD=1 THEN cD=0:
pj=1: j=1: fl=1: RN$="": END IF : END
DEFine
840 DEFine PROCedure Uw: wx: k3: pk: END
DEFine
850 :
860 DEFine PROCedure k3: REPeat key
870 AT 1,13: IF PEEK_W(163976) THEN INK
mCR:
 PRINT"CAPS ON": ELSE PRINT BLANK$(1 TO 7)
880 k=CODE(INKEY$): IF k>8 THEN EXIT key
890 END REPeat key: END DEFine
900 :
910 DEFine PROCedure pk: rz: k=k-48
920 IF k=-21 THEN zCLS: nd
930 IF k<=-1 AND k<>-14 OR k=77 OR k=78
THEN Uw
940 IF k=168 AND pj<9 AND f>0 THEN pj=pj+1:
j=j+76: Uv
950 IF k=168 AND f=0 OR pj=9 THEN pj=1:
j=1: Uv
960 IF k=160 AND pj>1 THEN pj=pj-1: j=j-76:
Uv
970 IF k=160 AND pj<=1 THEN Uw
980 IF k=144 THEN IF a>1 THEN a=a-1: Ux:
sx: Uv: ELSE : iX: Uw
990 IF k=146 AND t$=="flp" THEN t$="ram":
Ux: sx: Uv
1000 IF k=146 AND t$<>"flp" THEN t$="flp":
Ux: sx: Uv
1010 IF k=152 THEN IF a<2 THEN a=a+1: Ux:
sx: Uv
1020 IF k=79 THEN zCLS: tre=3: WCh
1030 IF k=0 THEN zCLS: tre=0: WCh
1040 IF k=184 THEN xp
1050 IF k=186 THEN Ux: sx: xp
1060 IF k=188 THEN df
1070 IF k=190 THEN Ux: sx: df
1080 IF k=192 THEN hd
1090 IF k=194 THEN Ux: sx: hd
1100 IF k=196 THEN rf
1110 IF k=198 THEN Ux: sx: : rf
1120 IF k=200 THEN lk
1130 IF k=202 THEN Ux: sx: lk
1140 IF k>=c THEN Uw
1150 END DEFine pk
1160 :
1170 DEFine PROCedure mA: hCR=2: mCR=0:
pn=7: zCLS: T: PAPER 7: INK 2: AT 3,2:
PRINT"EXEC_W": sw: Rx
1180 k3: pk
1190 IF k=-14 THEN wx: GO TO 1180
1200 IF k<c THEN EXEC_W t$&a&"_"&Z$(k+j)
1210 wx: mA: END DEFine
1220 :
1230 DEFine PROCedure xp: pn=7: hCR=0:
mCR=2: CLSc: T: rz: AT 0,0: PRINT"    {  }
COPY ": PAPER 7: S$=t$: IF a=1 THEN N$=a+1:
ELSE N$=a-1: END IF
1240 INK 0: AT 3,2: PRINT"  COPY ";TO
59;BLANK$: sw: Rx
1250 INK 0: AT 1,23: PRINT" [f]lp"&N$&"_
[r]am"& N$&"_    [w]in"&N$&"_ "
1260 AT 2,35: PRINT"[o]ther": CLS#0:
AT#2,24,33: PRINT#2,"<ENTER> == default":
PAPER#2,7: INK 0: AT 3,31: PRINT"  to
";BLANK$;BLANK$(TO 9): INK 2: AT 3,36:
INPUT o$
1270 IF o$=="f" THEN S$="flp": ELSE IF
o$=="w" THEN S$="win": ELSE IF o$=="r" THEN
S$="ram": ELSE IF o$=="m" THEN S$="mdv":
END IF
1280 BLOCK 186,20,138,10,pn: IF o$=="o"
THEN w=1: r=3: p=36: Oth: S$=o$: END IF
1290 IF S$&N$==t$&a THEN wx: iX: xp: ELSE :
INK 0: AT 3,33: PRINT"to ";: INK 2: PRINT
S$;N$;"_";BLANK$
1300 rx2: k3: pk
1310 IF k=-14 THEN wx: GO TO 1300
1320 IF k<c THEN CLS#0
1330 WHEN ERRor
1340 ERmsg: GO TO 1240
1350 END WHEN
1360 DEL: COPY t$&a&"_"&Z$(j+k) TO
S$&N$&"_"&Z$(j+k): rz: GO TO 1240
1370 END DEFine xp
1380 :
1390 DEFine PROCedure df: pn=2: hCR=0:
CLSc: T: AT 0,14: PRINT" {  } de-FILE "
1400 mCR=7: PAPER pn: INK 0: AT 3,1:
PRINT"de-FILE";TO 59;BLANK$: sw: Rx
1410 k3: pk
1420 IF k=-14 THEN wx: GO TO 1410
1430 CLS#0: mCR=0: Rx: INK 5: AT 3,1: PRINT
"de-FILE": INK 7: AT 3,14: PRINT Z$(j+k);:
INK 5: PRINT" (y/n)?";BLANK$: yeano
1440 IF k<c THEN CLSd: DELETE
t$&a&"_"&Z$(j+k)
1450 sx: IF c-1=76*(pj-1) THEN mCR=7: INK
0: LET pj=1: j=1: sw: END IF : CLSe: GO TO
1400
1460 END DEFine df
1470 :
1480 DEFine PROCedure hd: hCR=0: mCR=2:
pn=7: CLSc: T: AT 0,28: PRINT" {  } ";D$;"
COPY ": PAPER 7: INK 0: AT
3,3:PRINT"PRINT": sw: Rx
1490 STRIP 5: AT 0,28: PRINT" {  } ";D$;"
COPY "
1500 PAPER 7: CLSd: k3: pk
1510 IF k=-14 AND D$="ser1" THEN D$="ser2":
GO TO 1490
1520 IF k=-14 AND D$="ser2" THEN D$="ser1":
GO TO 1490
1530 CLS#0: INK#2,2: AT#2,24,30:
PRINT#2,"printer ready ... (y/n)?": AT
3,14: INK 2: PRINT Z$(k+j);BLANK$: yeano:
CLSd:
IF ok=0 THEN sw: GO TO 1500
1540 IF k<c THEN cop=1: L2: END IF
1550 CLOSE#7: CLSd: sw: Rx: GO TO 1500
1560 END DEFine hd
1570 :
1580 DEFine PROCedure rf: hCR=5: mCR=5:
pn=0: CLSc: T: AT 3,2: PAPER 0: INK 7:
PRINT"FORMAT ";: INK 2: PRINT t$;a;"_": sw:
Rx: rf2
1590 END DEFine rf
1600 :
1610 DEFine PROCedure rf2
1620 PAPER 7: AT 0,0: PRINT TO 45; : PAPER
5 : INK 0: PRINT " {  } FORMAT ";: PAPER 7:
PRINT BLANK$;BLANK$(1 TO 6): CLS#0
1630 WINDOW#0,124,132,297,14: PAPER#0, 7:
BORDER #0,1,0: INK#0, 0: CLS#0
1640 AT#0,0,0: STRIP#0,7: INK#0,0
1650 AT#0,2,2: PRINT#0,"flp1_  ==  [F1] "
1660 AT#0,4,2: PRINT#0,"flp2_  ==  [F2] "
```

```
1670 AT#0,6,2: PRINT#0,"mdv1_  ==  [F3] "
1680 AT#0,8,2: PRINT#0,"mdv2_  ==  [F4] "
1690 AT#0,10,2: INK#0,0: PRINT#0,"OTHER  ==
[F5] "
1700 AT#0,12,0: STRIP#0,5: PRINT#0,TO 4;
     "Use CAUTION!     ": STRIP#0,7: INK#0,0
1710 key3
1720 SELect ON ke
1730 =81,81+32: GO TO 140
1740 =27: CLS: BEEP 900,20: rf2
1750 =232: drive$="flp": num$="1": L=2:fmat
1760 =236: drive$="flp": num$="2": L=4:fmat
1770 =240: drive$="mdv": num$="1": L=6:fmat
1780 =244: drive$="mdv": num$="2": L=8:fmat
1790 =248: L=10: other
1800 END SELect
1810 END DEFine rf2
1820 :
1830 DEFine PROCedure other
1840 AT#0,L,2: PRINT#0,"    ";CHR$(188);"
[drive]";BLANK$
1850 AT#0,L,2: INPUT#0,drive$: IF
LEN(drive$)<>3 THEN GO TO 1840
1860 IF drive$=="mdv" OR drive$=="flp" OR
drive$=="ram" THEN GO TO 1870: ELSE GO TO
1840
1870 AT#0,L,2: PRINT #0,drive$&"
"&CHR$(188);BLANK$: AT #0,L,5:
INPUT#0,num$: IF LEN(num$)>1 OR
CODE(num$)>=58 OR CODE(num$)<=47 THEN GO TO
1870
1880 fmat
1890 END DEFine other
1900 :
1910 DEFine PROCedure fmat
1920 STRIP#0,2: INK#0,7: AT#0,L,0:
PRINT#0,"  "; drive$&num$&"_
";CHR$(188);"  ":
AT #0,L,7: INPUT#0,label$
1930 IF drive$=="ram" THEN FOR LNn=1 TO
LEN(label$): IF CODE(label$(LNn))>=58 OR
CODE(label$(LNn))<=47 THEN GO TO 1920: NEXT
LNn: END FOR LNn
1940 IF LEN(label$)>10 THEN BEEP 2000,20:
AT#0,L+1,0: STRIP#0,7: PRINT#0,BLANK$: IF
L=10: END IF : rf2
1950 WHEN ERRor
1960 ERmsg: AT#2,24,35: PRINT#2,"format
failed": GO TO 1990
1970 END WHEN
1980 FORMAT drive$&num$&"_"&label$
1990 WINDOW#0,413,10,50,241: PAPER#0,7
2000 PAUSE 20: CLSc: sw: Rx: rf2
2010 END DEFine fmat
2020 :
2030 DEFine PROCedure key3
2040 REPeat key
2050 ke=CODE(INKEY$)
2060 IF ke=81 OR ke=81+32 OR ke=232 OR
ke=236 OR ke=240 OR ke =244 OR ke=248 THEN
EXIT key
2070 IF ke<236 AND ke > 27 THEN BEEP
900,40: key3
2080 IF ke=27 THEN PAPER 7: CLS: BEEP
900,20: STRIP 7: nd
2090 END REPeat key
2100 END DEFine key3
2110 :
2120 DEFine PROCedure lk: hCR=0: mCR=2:
pn=7
2130 CLSc: T: AT 0,58: PRINT" {  } pre-
VIEW": BLOCK 26,10,432,0,5: PAPER 7: AT
3,1: INK 0: PRINT"preVIEW ": sw: Rx
2140 k3: pk
2150 IF k=-14 THEN wx: GO TO 2140
2160 CLS: PAPER 7: BLOCK 458,12,0,0,7:
CLSc:
BLOCK 458,1,0,235,5: AT 0,37: INK 2: PRINT
Z$(j+k): INK 0: BLOCK 458,1,0,10,5
2170 IF k<c THEN AT 0,23: PRINT"pre-
VIEWing:  ": cop=0: L2
2180 B5: WINDOW 462,250,25,3: PC: BORDER
1,5: CLSd: GO TO 2130
2190 END DEFine lk
2200 :
2210 DEFine PROCedure L2: IF cop=0: WINDOW
448,214,33,22: INK 0: CLS: esc: END IF
2220 IF cop=1: OPEN_NEW#7,D$: END IF
2230 OPEN#6,t$&a&"_"&Z$(j+k): esc
2240 IF EOF(#6) THEN IF cop=1:
PRINT#7,BLANK$: END IF : GO TO 2300: END IF
2250 LET i$=INKEY$
2260 IF i$=CHR$(27) THEN CLSd: AT#2,24,36:
PRINT#2,"abort?  (y/n)": yeano: IF ok=1
THEN GO TO 2300: ELSE esc: IF cop=0: GO TO
2240: END IF : IF cop=1: PRINT#7,BLANK$: GO
TO 1550: END IF
2270 LET i$=INKEY$(#6)
2280 IF cop=0 THEN L3: GO TO 2240
2290 IF cop=1 THEN L4: GO TO 2240
2300 CLOSE#6: IF cop=0: GO TO 2190: END IF
: IF cop=1 THEN GO TO 1550: END IF
2310 END DEFine L2
2320 :
2330 DEFine PROCedure L3:MD$=Z$(j+k)
2340 REPeat here
2350 IF LEN(MD$)<=3 THEN IF CODE(i$)>126 OR
CODE(i$)<32: INK 5: ELSE : INK 0: END IF :
EXIT here
2360 IF MD$(LEN(MD$)-3 TO LEN(MD$))=="_doc"
AND LEN(MD$)>3 AND MD$(LEN(MD$)-3 TO
LEN(MD$))=="_doc" THEN IF CODE(i$)=0 THEN
PRINT: END IF : IF CODE(i$)=8 THEN PC:
rCLS: CLOSE#7: lk
2370 IF CODE(i$)>126 OR CODE(i$)<32: INK 5:
ELSE : INK 0: END IF : EXIT here
2380 END REPeat here
2390 PRINT i$;
2400 END DEFine L3
2410 :
2420 DEFine PROCedure L4:MD$=Z$(j+k)
2430 REPeat hier
2440 IF LEN(MD$)<=3 THEN IF CODE(i$)>126 OR
CODE(i$)<32: i$=" ": END IF : EXIT hier
2450 IF LEN(MD$)>3 AND MD$(LEN(MD$)-3 TO
LEN(MD$))=="_doc" THEN IF CODE(i$)=0 THEN
PRINT#7,CHR$(13): END IF : IF CODE(i$)=8
THEN PRINT#7,CHR$(12): hd: END IF
2460 IF CODE(i$)>126 OR CODE(i$)<32: i$="
": END IF : EXIT hier
2470 END REPeat hier
2480 PRINT#7,i$;
2490 END DEFine L4
2500 :
2510 DEFine PROCedure lne:
BLOCK#2,458,1,24,2,0:
     BLOCK 458,1,0,10,0: END DEFine
2520 DEFine PROCedure nd: PAPER 7: lne:
tre=1: WCh: END DEFine
2530 DEFine PROCedure CL: BLOCK
450,220,0,11,7:PAPER 7: INK 5: AT 0,64:
PRINT CHR$(188);' shift TAB ': AT 0,0:
```

```
PRINT" TAB ";CHR$(189);:INK 0: PRINT"
SELECT_DEVICE  EXEC_W  UTILITIES ";TO 57;"
EXIT ": PAPER 5: INK 0:
FREE=(PEEK_L(163856)-PEEK_L(163852)-1024):
END DEFine
2540 :
2550 DEFine PROCedure K4: PAPER 7: REPeat
key
2560 ike=CODE(INKEY$)
2570 IF ike=9 OR ike=32 OR ike=252 OR
ike=253 OR ike>47 AND ike<58 THEN EXIT key
2580 IF ike>=58 AND ike<252 THEN K4
2590 END REPeat key: END DEFine K4
2600 :
2610 DEFine PROCedure Pick
2620 IF ike=253 THEN PrvW
2630 IF ike=9 THEN NxtW
2640 IF ike=252 THEN B5: GO TO 3160
2650 END DEFine Pick
2660 :
2670 DEFine PROCedure NxtW: tre=tre+1: IF
tre=4 THEN tre=0
2680 WCh: END DEFine
2690 DEFine PROCedure PrvW: tre=tre-1: IF
tre<0 THEN tre=3
2700 WCh: END DEFine
2710 :
2720 DEFine PROCedure WCh: lne: CL
2730 IF tre=0 THEN cj
2740 IF tre=1 THEN AT 0,22: PRINT" EXEC_W
": K4: Pick: mA
2750 IF tre=2 THEN AT 0,30: PRINT"
UTILITIES ": K4: Pick: NUT
2760 IF tre=3 THEN AT 0,57: PRINT" EXIT ":
K4: Pick: GO TO 3160
2770 END DEFine WCh
2780 :
2790 DEFine PROCedure cj: fen=0: RN$="":
pn=7: CLSe: BLOCK 90,100,42,11,0: BLOCK
88,99,43,11,7: BLOCK 88,10,43,100,5: AT
0,7: PRINT" SELECT_DEVICE "
2800 PAPER 5: INK 0: AT 10,8: PRINT"[
";t$&a;"_mode ]": AT 11,7: INK 7: PAPER 0:
PRINT u$: PAPER 7
2810 INK 0: BEEP 100,29: AT 2,9: PRINT'"F"
= flp1_': AT 4,9: PRINT'"R" = ram1_': AT
6,9: PRINT'"M" = mdv1_': AT 8,9: PRINT'"O"
= other'
2820 s=CODE(INKEY$(-1))
2830 IF s=9 THEN CLS#0: BLOCK
90,112,42,11,7: tre=1: WCh
2840 IF s=27 THEN CLS#0: BLOCK
90,112,42,11,7: tre=3: WCh
2850 IF s=253 THEN CLS#0: BLOCK
90,112,42,11,7: tre=3: WCh
2860 IF s=70 OR s=102 THEN t$="flp": a=1
2870 IF s=71 OR s=103 THEN t$="flp": a=2
2880 IF s=77 OR s=109 THEN t$="mdv": a=1
2890 IF s=78 OR s=110 THEN t$="mdv": a=2
2900 IF s=82 OR s=114 THEN t$="ram": a=1
2910 IF s=84 OR s=116 THEN t$="ram": a=2
2920 IF s=87 OR s=119 THEN t$="win": a=1
2930 IF s=79 OR s=111 THEN WINDOW#0,90,30,
69,84: w=0: r=0: p=8: Oth: W$=N$: t$=o$
2940 WHEN ERRor
2950 ERmsg: cj
2960 END WHEN
2970 WINDOW#0,413,10,50,241: cD=0: RN$="":
sx: B5: nd: END DEFine
2980 DEFine PROCedure Oth
2990 PAPER#w,pn: AT#w,r,p: PRINT#w,'
';CHR$(188);'_ ': AT#w,r,p: INPUT#w,o$: IF
o$="" OR o$=="f" THEN o$="flp": END IF : IF
o$=="r" THEN o$="ram": END IF : IF o$=="w"
THEN o$="win": END IF : IF o$=="n" THEN
o$="ndk": END IF : INK#w,0: AT#w,r,p:
PRINT#w,o$: IF LEN(o$)<>3 THEN GO TO 2990:
ELSE
3000 AT#w,r,p+3: PRINT#w," ": AT#w,r,p+3:
INPUT#w,N$: IF LEN(N$)=0 THEN GO TO 3000:
END IF
3010 IF CODE(N$)<58 AND CODE(N$)>47 THEN GO
TO 3020: ELSE GO TO 3000
3020 a=N$: END DEFine
3030 :
3040 DEFine PROCedure NUT: pn=5: T: BLOCK
458,1,0,10,7: PAPER 7: REPeat k2
3050 k=CODE(INKEY$): SELect ON k
3060 =9: CLS: BORDER 1,7: tre=3: WCh: =253:
CLS: BORDER 1,7: tre=2: WCh
3070 =27: CLS: nd: =128: cj: =232: xp:
=236: df: =240: hd: =244: rf: =248: lk
3080 END SELect : END REPeat k2: END DEFine
3090 :
3100 CLS#2: AT#2,24,31: PRINT#2," @
PLATYPUS Software "
```

Daisy Be Good Part X

by David Lassov

OK, guys, let's start wrapping up the main commentary on Bill Jones' suite of word Processors, that goes by the name of DAISY, by discussing ***typewriter mode***.

In doing so, we will bounce around some of Bill's fabulous internal menus, and finish the FUNCTION MENU, all except for the last item, which is the "Style Menu".... That one deserves its own, separate treatment!

We begin, by loading the AUTOSTART file on the disk, "Daisy #1" from Frank Davis and UPDATE! Magazine. Initialize the Printer with presses of 3, 2, 1, Y, Y, and Y, and get the FUNCTION MENU on screen.

Typewriter mode uses entries 1, 2, 3, 6, 8, 9, 0, :, and ; to print a page paragraph by paragraph, in "NEAR REAL TIME", and this is used for BOTH reports AND letters. For example, we set up paragraphs of text, by choosing option #1 at the FUNCTION MENU. We Press 2, in order to print Header, and the screen then asks us to type the CAPTION, of length limited by 80 characters. We do so; we press ENTER; and, we get our line of type, in the current print style of the printer.

We can get the Format Menu, by pressing 3 at the FUNCTION MENU. The Format Menu allows US to access the Print Style Menu, by pressing 3, and also allows us to skip the letterhead, in the case of typing with paper having a fancy letterhead, or something like that, by toggling 8.

We Print Typing, by pressing 6 at the FUNCTION MENU. This enables us to print "u$", which is a buffer of text set up by the powerful Input-Edit facilities of Daisy at entry #1 on the FUNCTION MENU. the Daisy db manager at the QUICKIE MENU.

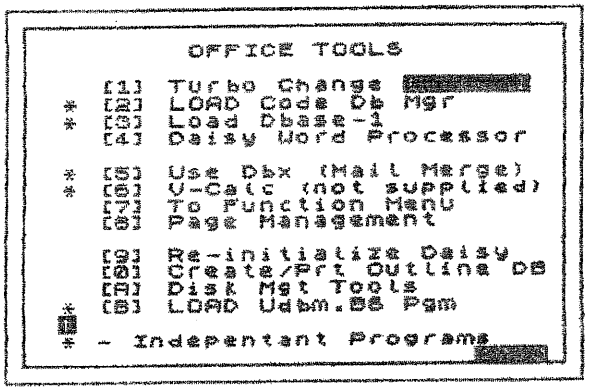
In typewriter mode, we use Office Tools at entry #8 of the FUNCTION MENU, only to access Page Management as #8, again. With Page Management, we have the current page number and lines, remaining to page end. We can FORCE page end, by selecting #1, here. The printer ends the current page, by performing LINE FEEDS, till it gets to the bottom of the

page, where it types the current page number, before continuing on to the next page. Should the paper be moved up or down in the printer carriage, we can reflect this in Daisy, by adjusting the number of lines to page end and pressing #2. The current page number can be changed, by pressing; #3. And #4 ESCAPES back to the FUNCTION MENU.

At the FM, #9 causes the printer to skip a line, while updating the line count, as shown onscreen. #0 at the FM is supposed to Print out the built-in letterhead and an optional address for letters, which is entered on-line. None of the issue disks from UPDATE Mag. had this feature implemented. However, see the following article on my new and improved version!

At the FM of Bill's original version, we Sign Off, by pressing the colon symbol, : . The printer springs to life, by feeding a couple of lines, before printing "Sincerely," and "Bill Jones", after two more line feeds! Lastly, it skips down to page bottom, types the current page number, and continues on to the next page.

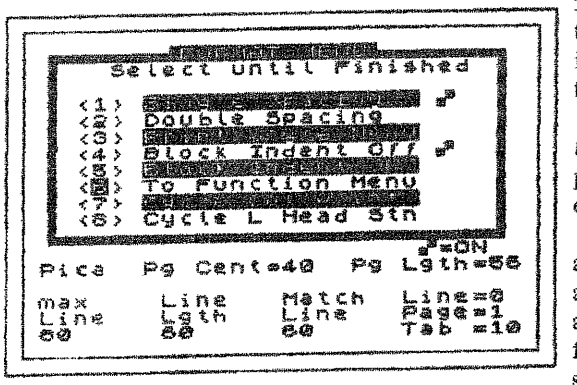
Next time, we talk about the last entry, <, on the FUNCTION MENU. This calls up the all-important Style Menu, where we select the print chain, for use by our printer.



Well, guys, we LOAD RAMDISK with all the daisy menus, and then LOAD the AUTOSTART file of our new and improved daisy disk. This brings up a MAIN MENU of compatible word processors, which we have broken out and optimized from Bill Jones' Daisy suite.

Let's punch 3, and LOAD dbms.B6. Everything we try for typewriter mode results in a BEEP, only. This is because "dbms" serves only as a gateway to further Data Base Management Systems, which are also part of Bill's amazing daisy suite!

Hmm..... we punch 2 at the MAIN MENU, and LOAD IN+ED.B6 ... . Now, when we punch 1 at the FUNCTION MENU, the QUICKIE MENU comes right up, ready to build a paragraph of text, contained in u$. When we escape back to the FM, we only get BEEP, upon pressing 2, 3, or 6. In other words, we can't Print a Header, access the Format Menu, or Print the Typing, Contained in u$, since IN+ED.B6 doesn't have any printer drivers. Likewise, we only get BEEPs, by selecting Page Management, Line Space, Letterhead, Sign Off, Page End, and Style Menu.



Now, if we punch 1 at the MAIN MENU, and LOAD PO+MM.B6, our banner charges right up, asking that we INITIALIZE THE PRINTERS. 3, 2, 1, y, y, and y result in daisy's FUNCTION MENU. But, upon pressing 1, we only get a BEEP, since PO+MM has no input facilities. However, we can Print a Header at 2, since the CAPTION is input, on-line. Only 40 characters, since we use ENLARGED and EMPHASIZED print for captions in PO+MM.

When we punch 3 at the FM, we go straight to the FORMAT MENU, where we can allow for letterhead stationary <8> or access the Print Style Menu <3> . .

Now, when we punch 6 at the FUNCTION MENU, we get a BEEP. However, let us BREAK and set

u$= "This is a TEST!!!!"

Then, when we GOTO FM, and punch 6 at the FM, the printer flies into action and prints our typing with the current print style, all nicely indented or not, according to our last specification when initializing the printers.

We can touch 8 at the FM and 8 at the OFFICE MENU, which brings up PAGE MANAGEMENT. Here, we can re-number the current page, or we can also FORCE the end of a page, by EITHER skipping lines down to the bottom OR changing the number of lines to page end, where we type the current page number and continue on to the next page.

A touch of 9 at the FM causes the printer to feed a line, whereas a touch of 0 prints out OUR current letterhead, with or without an (optional) addressee block. The print chain used is PICA.

Let us press #0 at the FUNCTION MENU. We are immediately asked whether we want it with or without addressee. The addressee option also lists the current time, date, etc., from our DALLAS Smartwatch below our telephone numbers!

BOTH Sign Off AND Page End work the same as in the original version of daisy by Bill Jones.

Now, ManlAd has practically EVERY feature of Daisy, jammed into its BASIC code. While this leaves little room, in which to maneuver, we can easily handle typewriter mode, as all inputting is done ON-LINE!

So, let us punch 0 at the MAIN MENU and LOAD ManlAd.B6. Our banner charges up, we initialize the printers; and, the FUNCTION MENU comes onto the screen.

By punching 1 at the FM, we can use the QUICKIE MENU, to construct a text file u$, containing a paragraph of information. Back at the FM, we touch 6, in order that the printer immediately list u$ on the page of typing, using the current print style.

By punching 2 at the FM, we INPUT a CAPTION for immediate printout, centered on the page, enlarged and emphasized.

We get the FORMAT MENU with a punch of 3 at the FM. This accesses the Print Style Menu with another punch of 3. This also allows for the presence of letterhead stationary <8>.

As above, 6 causes the printer to put out whatever is currently in u$.

We can punch 8 at the FM and 8 at the OFFICE MENU, thus getting to PAGE MANAGEMENT, where everything works as above with PO+MM. In fact, EVERYTHING WORKS FOR TYPEWRITER MODE in ManlAd, the same as in PO+MM with the addition of #1, the all-important ability to create u$.

So, if we can ever get some more memory, through bank switching or something, then we can expand ManlAd even more, to include any remaining few capabilities of Bill Jones' Daisy suite of word processors.

As it is, ManlAd is as good as Bill's software for typewriter mode. In fact, it is BETTER, as we don't have to wait for any menus to LOAD or subroutines to MERGE. Anyway, next issue's discussion of the Style Menu, should terminate our consideration of daisy.

7. Pseudo Hires Video Harware

The pseudo hires graphics video display generator consists of the Z80 CPU, ROM, RAM and a large part of the ZX-81 Sinclair logic chip (ULA) as shown in Fig. 2 with all relevant connections including the isolation resistors. For simplicity, only the 2K RAM version is shown.

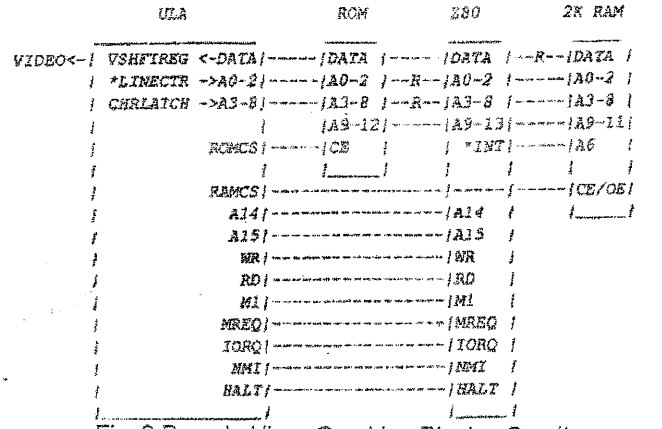


Fig. 3 Pseudo Hires Graphics Display Crcuit

The only difference between pseudo hires and Sinclair character hardware is the ULA LCNTR and the use of the INT input. Most pseudo hires core routines do not use INT and the ULA LCNTR is reset to zero every horizontal line. The exception is Xtricator which uses INT and makes dual use of the I register in INT mode 2 as part of the RST vector address when interrupted at the end of each horizontal line and at refresh time as a ROM pattern table pointer.

8. True Hires Video Hardware

The portion of the ZX81 hardware required for true hires graphics display consists of Z80 CPU, the RAM, the video shift register and the sync circuit of the ULA as hown in Fig. 4 with all relevant connections. Again the 2K SRAM is shown for simplicity but applies to larger SRAM designs as well. If a 16K RAMPACK is used, it must be slightly modified, as will be shown later, to enable the data output during RFSH time as required for this hires display method.

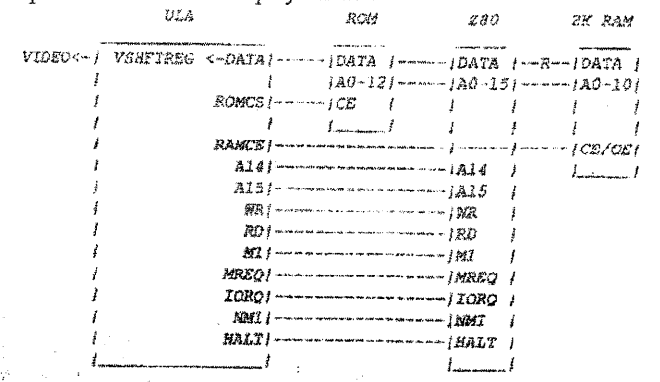


FIG 5 TRUE HIRES GRAPHICS VIDEO DISPLAY CIRCUIT

With the exception of WRX1K which creates a miniature hires screen on a 1K ZX81 all hires programs need a 6K hires graphics file (HFILE). Suitable RAM for true hires graphics can be implimented by modifying a standard 16K RAMPACK with a couple of diodes and a resistor.

The RAMPAK is modified to enable the data output at RFSH time by cutting the RD and RFSH lines at the edge connector and installing only two germanium diodes and a 4.7K pull-up resistor.

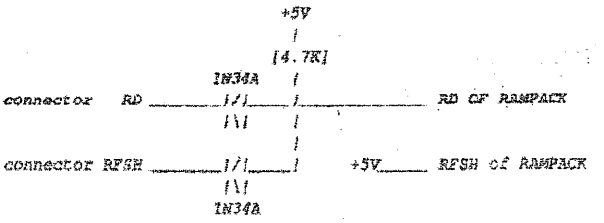


FIG 5 RAMPACK MODIFICATION FOR TRUE HIRES

9. ZX81 CHARACTER DISPLAY TIMING

All the Sinclair ZX81 character display hardware shown in FIG 2 is required to generate a standard screen of 24 lines of 32 characters. The character display starts when the last blank line at the top of the screen has occurred and and the video routine jumps to the DFILE echo above 32K. The hardware in the ZX81 ULA takes control when any opcode is executed above 32K (A15 high and M1 low) with data bit 6 equal to zero. The video data is loaded in these simplified steps:

1. The ULA loads the character code into a address register in the ULA
2. The ULA forces the data lines low.
3. The CPU interprets the byte as a NOP.
4. The ULA generates part of the ROM pattern table address and the Z80 CPU generates the pattern table pointer with the I register.
5. The pattern byte is loaded into the ULA shift register.

One could say that the Dfile is literally executed with NOPs substituted for each character code. Each NOP executes in 4 CPU clock cycles at 3.25 MHz or 8 pixels at 6.5MHz from the ULA video shift register.

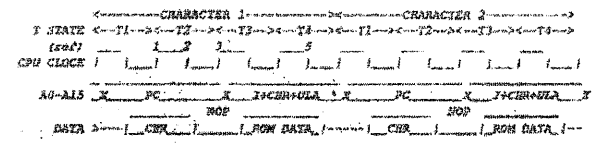


FIG 6 ZX81 CHARACTER DISPLAY TIMING

1. Each character code (CHR$) byte in DFILE is addressed by the CPU PC, on the rising edge T2 data is loaded from DFILE into the ULA : bits 0-5 into a 6 bit ULA address latch while bit 7 is loaded into 1 bit ULA video invert latch
2. On the falling edge of T2, the ULA forces all CPU data lines to zero.
3. On the rising edge of T3 the low data lines are interpreted by the CPU as a NOP instruction.
4. During T3/4, the CPU executes the cycle and ROM address lines are generated with 1 register on A9-A15, the ULA 6 bit character code register on A3-A8, and the ULA modulo 8 line counter on line A0-A2, 5.
5. On the failing edge of T4, pattern data from the ROM is loaded into ULA video shift register and 8 video pixels are shifted out at 6.5MHz.
6. If character code bit 7 latch in ULA equals 1, video pixels are inverted.
7. The CPU increments the program counter and fetches the next character code.
8. This repeats until a HALT (Sinclair) is fetched.
9. HALT opcode bit 6 = 1 and is therefore executed (no NOP).
1 0. The ULA generates a HSYNC pulse independend of the CPU timing and the ULA LCNTR is incremented.
11. The halted CPU continues to execute NOPs, incrementing register R and samples the INT input on the rising edge of each T4.
12. When A6, which is hardwired to INT, goes low during refresh time, (bit 6 of the R reg = 0), the Z80 executes the INT routine (below 32K)
13. CPU returns from INT and resumes "excution" of DFILE CHR$ codes.
14. The process repeats 192 times and then INT routine returns to the main video routine, turns on the NMI generator and switches back to the application code.

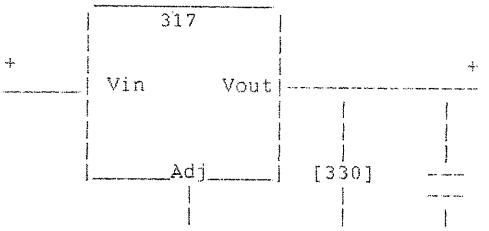
TS-2050 Modem Compatible Serial I/F

by Wilt Rigter

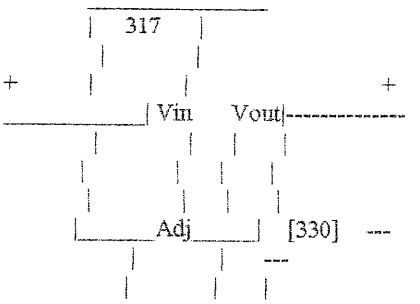
In response to Don's request on page 6 of ZXir QLive to unscramble the schematic in the final issue of UPDATE! magazine. I had already done that - it was a challenge and I recognized the problem. Attached is the unscrabled version. The problem is one of proportional versus non-proportional fonts.

For example from page 6:

Courier font (non-proportional)



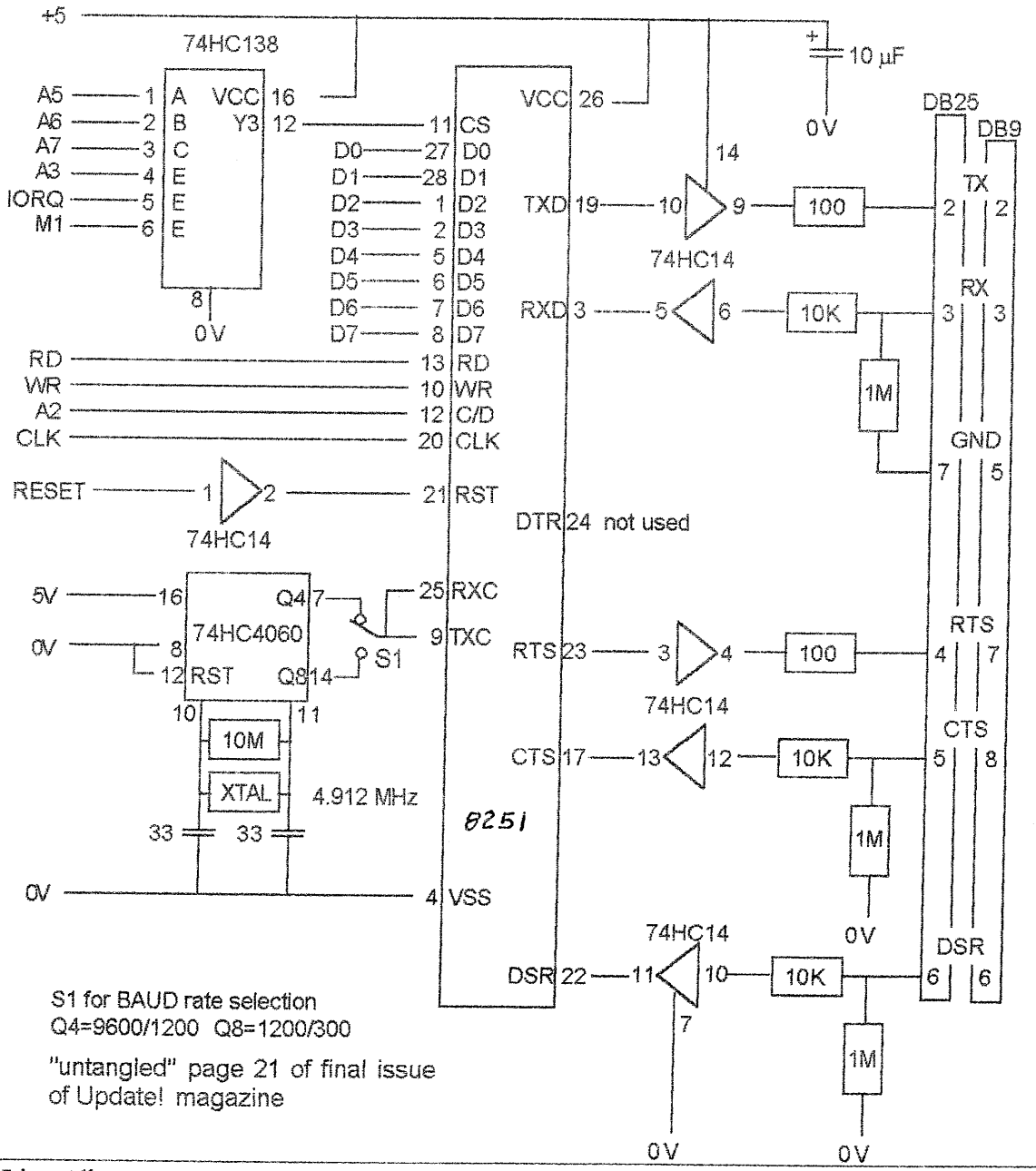
Helvetica font (porportional) - figure above copied and then font changed.



I verified the pinout of the 8251 and corrected pin 24 callout to DTR.

Les Cottrell

TS2050 MODEM COMPATIBLE SERIAL I/F



SeekQL 2.09 - Part 2

by Al Teng

```
1700 Find$="NULL"
1710 Search
1720 END DEFine
1730 :
1740 DEFine PROCedure label
1750 bop: AT 24,12: INK 2:
     INPUT " printer ready (y/n)?
";a$
1760 IF a$=="y" THEN GO TO 1780
1770 IF a$=="n"  OR a$<>"Y" OR
a$<>"y"
     THEN Show_DIF
1780 DELETE RAM1_label_DIF
1790 OPEN_NEW#5,RAM1_label_DIF
1800 Record$=Z$(n+1)
1810 FOR r=0 TO LEN(Record$)
1820 IF r=LEN(Record$) THEN PRINT#5
1830 PRINT#5,Record$(r+1);
1840 NEXT r: END FOR r
1850 CLOSE#5
1860 la=14: exp_to_txt
1870 END DEFine
1890 DEFine PROCedure exp_to_txt
1900 DELETE ram1_Record_txt
1910 OPEN_NEW#5,ram1_Record_txt
1920 FOR n=la TO LEN(Record$)
1930 IF Record$(n)=CHR$(34) THEN
NEXT n
1940 IF Record$(n)=CHR$(44) THEN
bop: PRINT#5:
     END IF
1950 IF Record$(n)<>CHR$(44)
     THEN PRINT#5,Record$(n);
1960 NEXT n
1970 END FOR n
1980 CLOSE#5
1990 DIM T$(16,96)
2000 OPEN_IN#5,ram1_Record_txt
2010 FOR e=0 TO 14
2020 IF EOF(#5) THEN EXIT e
2030 INPUT#5,T$(e)
2040 END FOR e: CLOSE#5: e=e-1
2050 OPEN#4,ser1
2060 s=4
     : REMark for onscreen test >>>
s=2
2070 key_$=T$(0)
2080 s1_$=T$(1)
2090 s2_$=T$(2)
2100 s3_$=T$(3)
2110 s4_$=T$(4)
2120 s5_$=T$(5)
2130 s6_$=T$(6)
2140 s7_$=T$(7)
2150 s8_$=T$(8)
2160 s9_$=T$(9)
2170 s10_$=T$(10)
2180 offset$=Blank$(1 TO margin$)
2190 IF LEN(s2_$)=0 THEN
PRINT#s,offset$ & s1_$
2200 IF LEN(s2_$)>=1
     THEN PRINT#s,offset$ & s2_$;"
";s1_$
2210 PRINT#s,offset$ & s3_$
2220 IF LEN(s4_$)=0 THEN GO TO
2230:
     ELSE PRINT#s,offset$ & s4_$
2230 PRINT#s,offset$ & s5_$;",
";s6_$;"     ";s7_$
2240 Adjust_Printer
2250 CLOSE#4
2260 n=lstnm
2270 Show_DIF
2280 END DEFine
2300 DEFine PROCedure Set_Printer
2310 DELETE Dvice$ & "LineF_eed"
2320 OPEN_NEW#5,Dvice$ &
"LineF_eed"
2330 BLOCK 260,14,45,167,0: STRIP
0: INK 5:
     AT 17,15: PRINT CHR$(188);
     " Line Feeds between labels":
AT 17,11:
     INPUT LnFd$
2340 IF LEN(LnFd$)=0 THEN
LnFd$="0": END IF :
     FOR h=1 TO LEN(LnFd$): IF
LnFd$(h)>CHR$(57)
     OR LnFd$(h)<CHR$(48) THEN bop:
LnFd$="0":
     END IF : NEXT h: END FOR h
2350 PRINT#5,LnFd$
2360 BLOCK 260,14,45,167,0: STRIP
0: INK 5:
     AT 17,15:  PRINT CHR$(188);"
Margin Offset":
     AT 17,11: INPUT margin$
2370 IF LEN(margin$)=0 THEN
margin$="4": END IF :
     FOR h=1 to LEN(margin$):
     IF margin$(h)>CHR$(57) or
margin$(h)<CHR$(48)
     THEN bop: margin$="1": END IF:
NEXT h:
     END FOR h
2380 PRINT#5,margin$
2390 CLOSE#5: END DEFine
2410 DEFine PROCedure
Adjust_Printer:  DIM T$(2,3)
2420 WHEN ERRor
2430  LnFd$="3": margin$="4"
2440 END WHEN
2450 OPEN_IN#5,Dvice$ & "LineF_eed"
2460 FOR e=0 TO 1
2470 IF EOF(#5) THEN EXIT e
2480 INPUT#5,T$(e)
2490 END FOR e: CLOSE#5: e=e-1
2500 LET LnFd$=T$(0)
2510 LET margin$=T$(1)
2520 LET offset=margin$
2530 FOR Z=1 TO LnFd$
2540 PRINT#s
2550 NEXT Z: END FOR Z
2560 END DEFine
2580 DEFine PROCedure Search
     : REMark open File: CLOSE#5:
CLOSE#6
2590 DIM Z$(384,756)
2600 OPEN_IN#6,Dvice$ & Sname$ &
EXTen$
2610 FOR c=0 TO 386
2620 IF EOF(#6) THEN EXIT c
2630 WHEN ERRor
2640  CONTINUE
2650 END WHEN
2660 INPUT#6,Z$(c)
2670 END FOR c: CLOSE#6
2680 c=c-2
2690 m=0: n=0
2700 sedit: labels: Show_DIF
2710 END DEFine
2730 DEFine PROCedure show_date
2740 AT 2,10
2750 FOR r=1 TO LEN(Record$)
2760 IF Record$(2)=CHR$(34) THEN
rr=r+1
2770 show_rest
2780 END DEFine
2800 DEFine PROCedure show_key
2810 AT 2,40
2820 FOR r=rr TO LEN(Record$)
2830 IF Record$(r)=CHR$(34) THEN
rr=r
2840 show_rest
2850 END DEFine
2870 DEFine PROCedure show_rest
2880 FOR r=r TO LEN(Record$)
2890 IF Record$(r)=CHR$(34) THEN
NEXT r
2900 IF Record$(r)=CHR$(26) THEN GO
TO 2970
2910 IF Record$(r)=CHR$(44) AND
     Record$(r-1)=CHR$(34) THEN GO
TO 2960
2920 IF Record$(r)=CHR$(44) AND
     Record$(r-1)<>CHR$(34) THEN
PRINT Record$(r);:
     NEXT r
2930 IF Record$(r)=CHR$(44) AND
     Record$(r-1)<>CHR$(32) THEN
PRINT : NEXT r
2940 IF Record$(r)<>CHR$(44) THEN
     PRINT Record$(r);: NEXT r
2950 END FOR r
2960 PRINT
Blank$;Blank$;Blank$;Blank$: rr=r+2
2970 END DEFine
2990 DEFine PROCedure show_nums
3000 STRIP 0: INK 7
3010 y=2
3020 WINDOW 130,12,106,170
3030 FOR r=rn TO LEN(Record$)
3040 IF Record$(r)<>CHR$(44) THEN
     PRINT Record$(r);: NEXT r: END
IF
3050 IF y=2: WINDOW 130,12,105,180
3060 IF y=3: WINDOW 130,12,105,190
3070 IF y=4: WINDOW 130,12,356,170
3080 IF y=5: WINDOW 130,12,356,180
3090 IF y=6: WINDOW 130,12,356,190
3100 IF Record$(r)=CHR$(44) THEN
y=y+1: NEXT r:
     END IF
3110 END FOR r
3120 WINDOW 512,256,0,0: INK 0
3130 END DEFine
3150 DEFine PROCedure Show_DIF :
y=0 :
     REMark CHR$(34/44/32)=
",<space>
3160 WINDOW 512,256,0,0
3170 redit: stripe
3180 AT 22,2: PRINT "Rec # :  ";:
INK 2:
     PRINT n;TO 22;: INK 0: PRINT
"Find :  ";:
     IF Find$="NULL" THEN INK 7:
ELSE INK 5:
     PRINT Find$
3190 STRIP 0: INK 7:
3200 AT 24,3: PRINT CHR$(190);
CHR$(191);
     CHR$(188); CHR$(189);: INK 2:
     PRINT"
[back/next/first/last]       ";:
     INK 7: PRINT TO 42,"F";: INK
5: PRINT"ind  ";:
     INK 7: PRINT"M";: INK 5:
PRINT"ore  ";: INK 7:
     PRINT"R";: INK 5: PRINT"ecord
";: INK 7:
     PRINT"P";: INK 5: PRINT"rint
s";: INK 7:
     PRINT"W";: INK 5: PRINT"itch
e";: INK 7:
     PRINT"X";: INK 5: PRINT"it"
3210 Record$=Z$(n+1)
3220 STRIP 2: INK 7
```

```
3230 AT 1,2: PRINT "Using :  ";
     Sname$ & EXTen$;Blank$
3240 AT 2,2: PRINT " Date :
";Blank$
3250 show_date
3260 AT 2,34: PRINT "Key :
";Blank$
3270 WINDOW 260,10,240,20: PAPER 2:
CLS
3280 rc=1
3290 FOR r=rr TO CHR$(34)
3300 STRIP 0: INK 7
3310 IF Record$(r)=CHR$(34) THEN
NEXT r
3320 IF Record$(r)=CHR$(26) THEN
r=r-1: END IF
3330 IF Record$(r)=CHR$(32) AND
     Record$(r-1)=CHR$(44) THEN
     PRINT Record$(r-1);" ";: NEXT
r
3340 IF Record$(r)<>CHR$(44) AND
     Record$(r-1)=CHR$(44) AND
     Record$(r-2)=CHR$(34)THEN
show_nums:
     GO TO 3410
3350 IF Record$(r)=CHR$(44) AND
     Record$(r-1)<>CHR$(34) THEN
PRINT;: NEXT r
3360 IF Record$(r)=CHR$(44) THEN
PRINT: NEXT r
3370 PRINT Record$(r);
3380 NEXT r
3390 END FOR r
3400 WINDOW 512,256,0,0
3410 Options
3420 END DEFine Show_DIF
3440 DEFine PROCedure Options
3450 REPeat ops
3460 LET reed=CODE(INKEY$(-1))
3470 IF reed=10 THEN Show_DIF
3480 IF reed=70 OR reed=102 THEN
find
3490 IF reed=77 OR reed=109 THEN
more
3500 IF reed=80 OR reed=112 THEN
label
3510 IF reed=82 OR reed=114 THEN
Record
3520 IF reed=87 OR reed=119 THEN
sWatch
3530 IF reed=88 OR reed=120 THEN
PAPER 7: CLS: menu
3540 IF reed=208 THEN up
3550 IF reed=216 THEN down
3560 IF reed=192 THEN first
3570 IF reed=200 THEN last
3580 END REPeat ops
3590 Show_DIF
3600 END DEFine Options
3620 DEFine PROCedure up
3630 IF n<=0 THEN first
3640 FndBlnk: n=n-1: lstnm=n:
Show_DIF
3650 END DEFine up
3670 DEFine PROCedure down
3680 n=n+1
3690 IF n=c THEN first
3700 FndBlnk: lstnm=n: Show_DIF
3710 END DEFine down
3730 DEFine PROCedure first
3740 FndBlnk: n=0: Show_DIF
3750 END DEFine first
3770 DEFine PROCedure last
3780 n=c-1
3790 IF n=c THEN first
3800 FndBlnk: lstnm=n: Show_DIF
3810 END DEFine last
3830 DEFine PROCedure Record
3840 stripe: AT 22,10: PRINT
Blank$(1 TO 5);
     AT 22,2: INPUT "Rec # :  ";Rn$
3850 IF Rn$="" THEN Show_DIF
3860 n=Rn$
3870 IF n>c THEN last
3880 Show_DIF
3890 END DEFine Record
3910 DEFine PROCedure find
3920 POKE 163976,0
3930 stripe: FndBlnk: AT 22,22:
     INPUT 'Find :  '; Find$
3940 IF Find$=="" THEN Show_DIF
3950 n=-1
3960 more
3970 END DEFine find
3990 DEFine PROCedure more
4000 IF Find$=="NULL" OR Find$=""
THEN Show_DIF
4010 AT 22,29: STRIP 7: INK 2:
PRINT Find$
4020 cap$=Find$(1)
4030 IF CODE(cap$)>96 THEN bop:
     cap$=CHR$(CODE(cap$)-32)
4040 FOR n=n+1 TO c-1
4050 Record$=Z$(n+1)
4060 AT 22,10: PAPER 7: INK 2:
     PRINT n;Blank$(1 TO 4): PAPER
0: INK 7
4070 FOR fi=0 TO LEN(Record$)
4080 IF cap$<>Record$(fi+1) AND
     Find$(1)<>Record$(fi+1) THEN
NEXT fi
4090 IF Find$(1)==Record$(1+fi)
THEN
     IF Find$==Record$(1+fi TO
LEN(Find$)+fi):
     lstnm=n: Show_DIF
4100 NEXT fi
4110 END FOR fi
4120 NEXT n
4130 END FOR n
4140 n=c-1 AND Find$<>REC$(1+fi TO
LEN(Find$)+fi):
     STRIP 7: bop: INK 2: AT 22,29:
     PRINT'no (more) match(es)
found for "';:
     INK 0: PRINT Find$;: INK 2:
PRINT'" ... ':
     bop: STRIP 0: INK 2: AT 24,10:
     PRINT"  ";Press$;"  ": PAUSE:
     BLOCK 300,10,168,220,7:
FndBlnk: n=lstnm:
     Show_DIF
4150 END DEFine more
4170 DEFine PROCedure menu
     : REMark program screen
4180 fenetre=0: CLS: INK 0
4190 Find$="NULL"
4200 Cmd_Line: MoreFile: SelectFile
4210 END DEFine start
4230 DEFine PROCedure Cmd_Line
     : REMark more program screen
4240 PAPER 7: AT 1,7: stripe:
     PRINT" FILES  I/O DEVICES "TO
50;"EXIT "
4250 BLOCK 512,1,0,9,2: BLOCK
512,1,0,20,2
4260 INK 2: AT 1,58: PRINT'  @
PLATYPUS Software':
     INK 0
4270 END DEFine Cmd_Line
4290 DEFine PROCedure Key1
4300 REPeat KEYp
4310 ke=CODE(INKEY$)
4320 IF ke=9 OR ke=32 OR ke=27 OR
ke=253 THEN bop:
     EXIT KEYp
4330 IF ke=208 OR ke=216 THEN EXIT
KEYp
4340 END REPeat KEYp
4350 END DEFine Key1
4370 DEFine PROCedure Key2
4380 REPeat Qep
4390 ke=CODE(INKEY$)
4400 IF ke=70 OR ke=71 OR ke=77 OR
ke=78 THEN
     EXIT Qep
4410 IF ke=82 OR ke=84 OR ke=87 OR
ke=88 THEN
     EXIT Qep
4420 IF ke=102 OR ke=103 OR ke=109
OR ke=110 THEN
     EXIT Qep
4430 IF ke=114 OR ke=116 OR ke=119
OR ke=120 THEN
     EXIT Qep
4440 IF ke=232 OR ke=236 OR ke=240
OR ke=248 THEN
     EXIT Qep
4450 IF ke=250 OR ke=253 OR ke=27
OR ke=9 THEN
     EXIT Qep
4460 IF ke<236 AND ke>=27 THEN bop:
Key2
4470 END REPeat Qep: END DEFine
Key2
4490 DEFine PROCedure Key3
4500 REPeat QEYp
4510 ke=CODE(INKEY$)
4520 IF ke=234 OR ke=82 OR ke=114
OR ke=115
     OR ke=83 THEN EXIT QEYp
4530 IF ke=67 OR ke=68 OR ke=79 OR
ke=86 OR ke=87
     THEN EXIT QEYp
4540 IF ke=99 OR ke=100 OR ke=111
OR ke=118
     OR ke=119 THEN EXIT QEYp
4550 IF ke=232 OR ke=236 OR ke=238
OR ke=240
     OR ke=248 OR ke=234 THEN EXIT
QEYp
4560 IF ke=242 OR ke=80 OR ke=112
OR ke=246
     OR ke=121 OR ke=89 THEN EXIT
QEYp
4570 IF ke=250 OR ke=253 OR ke=27
OR ke=9 THEN
     EXIT QEYp
4580 IF ke<236 AND ke>=27 THEN bop:
Key3
4590 END REPeat Q
4600 END DEFine Key3
4620 DEFine PROCedure PickOne
     : REMark TAB/shift-TAB/SPACE
4630 IF ke = 250 THEN BEEP 900,20:
menu
4640 IF ke = 253 THEN BEEP 900,20:
PrevWindow
4650 IF ke = 9 THEN BEEP 200,10:
NextWindow
4660 IF ke = 27 THEN BEEP 200,10:
fenetre=4:
     PrevWindow
4670 END DEFine PickOne
4690 DEFine PROCedure NextWindow
     : REMark move to right
4700 fenetre = fenetre+1:
     IF fenetre>2 THEN fenetre=0
4710 WindowChoice
4720 END DEFine NextWindow
4740 DEFine PROCedure PrevWindow
     : REMark move to left
4750 fenetre=fenetre-1: IF
fenetre<0 THEN fenetre=2
4760 WindowChoice
4770 END DEFine PrevWindow
4790 DEFine PROCedure WindowChoice
     : REMark branch to ...
4800 CLScreen
4810 IF fenetre = 0 THEN File
```

```
4820 IF fenetre = 1 THEN devo
4830 IF fenetre = 2 THEN out
4840 END DEFine WindowChoice
4860 DEFine PROCedure out
     : REMark EXIT program
4870 Cmd_Line: AT 1,49: STRIP 2:
INK 7:
     PRINT " EXIT ": stripe
4880 Key1: PickOne
4890 SELect ON ke
4900 =32: GO TO 5980
4910 END SELect
4920 END DEFine
4940 DEFine PROCedure devo
     : REMark select I/O device
4950 Cmd_Line: AT 1,14: STRIP 2:
INK 7:
     PRINT" I/O DEVICES "
4960 WINDOW#3,136,112,84,20
4970 PAPER#3,7: BORDER#3,1,2:
INK#3,5: CLS#3
4980 BLOCK 7,112,220,21,55: BLOCK
137,7,90,132,55
4990 STRIP#3,0: PRINT#3,TO 6;"I/O
device";
     Blank$(1 TO 6): STRIP#3,7:
INK#3,0
5000 PRINT#3,\"     [F1]  =  flp1_ "
5010 PRINT#3, "     [F2]  =  flp2_ "
5020 PRINT#3,\"     [F3]  =  mdv1_ "
5030 PRINT#3, "     [F4]  =  mdv2_ "
5040 PRINT#3,\"     [F5]  =  other "
     : REMark ser1/ser2/etc., okay
5050 STRIP#3,2: INK#3,7:
     PRINT#3,\"      ";Label$;"
"
5060 GR=0: fenetre=1: Key2: PickOne
5070 SELect ON ke
5080 =27: fenetre=0: File
5090 =232, 70,102: Dvice$="flp1_":
menu
5100 =236, 71,103: Dvice$="flp2_":
menu
5110 =240, 77,109: Dvice$="mdv1_":
menu
5120 =244, 78,110: Dvice$="mdv2_":
menu
5130 =119, 87: Dvice$="win1_": menu
5140 =120, 88: Dvice$="win2_": menu
5150 =114, 82: Dvice$="ram1_": menu
5160 =116, 84: Dvice$="ram2_": menu
5170 =248: IPdev
5180 File
5190 END SELect : END DEFine devo
5210 DEFine PROCedure IPdev
     : REMark "other" I/O device
5220 BLOCK 54,10,162,100,7: stripe
5230 AT 10,27: INPUT Dvice$
5240 IF LEN(Dvice$)<>5 THEN GO TO
5220
5250 IF Dvice$(5)<>"_" THEN GO TO
5220
5260 IF Dvice$(4)<CHR$(49) OR
Dvice$(4)>CHR$(56)
     THEN GO TO 5230: ELSE devo
5270 END DEFine IPdev
5290 DEFine PROCedure File:
CLOSE#5: CLOSE#6:
     MoreFile: SelectFile: END
DEFine
5310 DEFine PROCedure MoreFile:
CLOSE#5: CLOSE#6
5320 IF GR=0: COLOR=7: STRAP=5:
PEN=0
5330 IF GR=1: COLOR=31: STRAP=51:
PEN=2
5340 CLScreen
5350 Cmd_Line: AT 1,7: STRIP 2: INK
7: PRINT" FILES ": stripe
5360 WINDOW#3,266,187,42,20
5370 PAPER#3,COLOR: BORDER#3,1,2:
INK#3,0: CLS#3
5380 BLOCK 268,8,46,207,55: BLOCK
7,188,308,21,55
5390 PRINT#3,\"   [F1] = ";:
UNDER#3,1:
     PRINT#3,"O";: UNDER#3,0:
     PRINT#3,"pen a database for
SEARCHing"
5400 PRINT#3,\"   [F2] = ";:
UNDER#3,1:
     PRINT#3,"C";: UNDER#3,0:
     PRINT#3,"reate a new database"
5410 PRINT#3,\"   [F3] = ";:
UNDER#3,1:
     PRINT#3,"D";: UNDER#3,0:
     PRINT#3,"evices (change)"
5420 BLOCK#3,262,45,0,63,7:
PAPER#3,7
5430 PRINT#3,\"   [F4] = s";:
UNDER#3,1:
     PRINT#3,"W";: UNDER#3,0:
     PRINT#3,"itch ";Dvice$ &
Sname$ & EXTen$
5440 BLOCK#3,262,45,0,83,COLOR:
STRIP#3,COLOR:
     PRINT#3,\"   [F5] = ";:
UNDER#3,1:
     PRINT#3,"V";: UNDER#3,0:
     PRINT#3,"erify ";Dvice$ &
Sname$ & EXTen$
5450 INK#3,7: STRIP#3,2:
BLOCK#3,262,40,0,105,2
5460 PRINT#3,\"   [F6] = ";:
UNDER#3,1:
     PRINT#3,"R";: UNDER#3,0:
     PRINT#3,"eturn to ";Dvice$ &
Sname$ & EXTen$
5470 STRIP#3,0:
BLOCK#3,262,60,0,125,0
5480 PRINT#3,\"   [F7] = ";:
UNDER#3,1:
     PRINT#3,"S";: UNDER#3,0:
     PRINT#3,"creen_edit ";Dvice$ &
Sname$ & EXTen$
5490 PRINT#3,\"   [F8] = ";:
UNDER#3,1:
     PRINT#3,"P";: UNDER#3,0:
     PRINT#3,"rinter Line Feeds ";:
INK#3,5:
     PRINT#3, LnFd$;: INK#3,7:
     PRINT#3," / Margin ";:
INK#3,5:
     PRINT#3,margin$
5500 INK#3,7: PRINT#3,\"   [F9] =
director";:
      UNDER#3,1: PRINT#3,"Y";:
UNDER#3,0
5510 END DEFine MoreFile
5530 DEFine PROCedure SelectFile
5540 Key3: PickOne
5550 YourChoice=ke
5560 SELect ON YourChoice
5570 = 27: out
5580 =232, 111, 79: GR=1: Search
5590 =234, 114, 82: GR=1: reSHOW
5600 =236,  99, 67: GR=0: MoreFile:
bop: xyz=0:
     MakeFile
5610 =238, 115, 83: GR=0:
MakeLabel: CLS
5620 =240, 100, 68: GR=1: MoreFile:
devo
5630 =242, 112, 80: GR=0:
Set_Printer
5640 =244, 119, 87: GR=1: sWitch
5650 =248, 118, 86: CLScreen:
     COPY Dvice$ & Sname$ & EXTen$
     TO con_438X201A42X31: GR=0:
PAUSE
5660 =246, 121, 89: GR=1: direct:
PAUSE
5670 END SELect
5680 File
5690 END DEFine SelectFile
5710 DEFine PROCedure sWitch
     : REMark change active
Filename
5720 GR=1: MoreFile
5730 CLStrip
5740 AT 1,7: STRIP 2: INK 7: PRINT"
NEW_NAME ":
     stripe
5750 BLOCK 200,12,104,90,0
5760 BLOCK 196,10,106,90,7
5770 STRIP#3,7: AT 9,17: INPUT' NEW
Filename:   ';
     Sname$
5780 IF LEN(Sname$)=0:
Sname$="GADDRESS":
     BEEP 100,10
5790 IF LEN(Sname$)>8:
Sname$="GADDRESS":
     BEEP 2000,20: GO TO 5720
5800 GR=0: File
5810 END DEFine New_Name
5830 DEFine PROCedure reSHOW: CLS:
sedit: ReLabel:
     Show_DIF: END DEFine
5850 DEFine PROCedure ReLabel
5860 WINDOW 86,160,10,50
5870 FOR la=1 TO 10
5880 PRINT L$(la)
5890 NEXT la: END FOR la
5900 PRINT: PRINT
5910 FOR la=11 TO 13
5920 PRINT L$(la)
5930 NEXT la: WINDOW 86,40,260,170
5940 FOR la=14 TO 16
5950 PRINT L$(la)
5960 NEXT la
5970 END DEFine
5990 DEFine PROCedure direct: DIM
dir$(384,24)
6000 DELETE Dvice$ & "FLIST_imp"
6010 OPEN_NEW#6,Dvice$ &
"FLIST_imp"
6020 DIR#6,Dvice$: CLOSE#6
6030 OPEN_IN#7,Dvice$ & "FLIST_imp"
6040 FOR c=0 TO 383
6050 IF EOF(#7) THEN EXIT c
6060 INPUT#7,dir$(c): END FOR c:
CLOSE #7: c=c-1
6070 CLS#3: PAPER#3,7: INK#3,0:
PRINT#3
6080 FOR n=2 TO c
6090 dirY$=dir$(n)
6100 IF LEN(dirY$)>4 AND
dirY$(LEN(dirY$)-3
     TO LEN(dirY$))=="_exp": bop:
     PRINT#3,TO 2;dirY$
6110 NEXT n
6120 END DEFine
6130:
6140 CLScreen: CLStrip: bop
6150 AT 1,8: INK 0: STRIP 5: PRINT"
CAPS LOCK ";:
     IF NOT PEEK_W(163976): PRINT
"off ": ELSE :
     INK 2:  PRINT "ON ": stripe
6160:
6170 REMark  *******
PLAYTYPUS Software
*******
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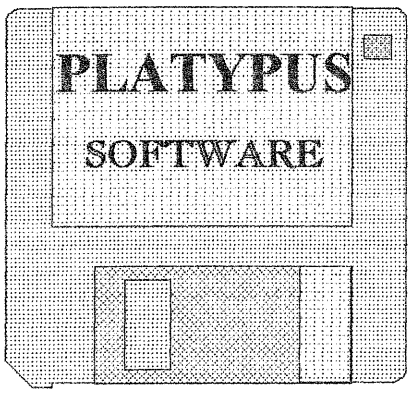

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QL Hacker's Journal

Supporting All QL Programmers

Timothy Swenson, *Editor*
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ZX-TEAM MAGAZIN

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TS-2068 books:

1 Technical Manual - Time Designs Magazine
1 The Timex Sinclair 2068 Explored - (Tim Hartnell)
1 T/S 2068 Basics And Beyond - (Sharon Z. Aker)
2 User Manuals - T/S 2068 Personal Color Computer
1 Beginner/Intermediate Guide (Fred Blechman)
1 Intermediate/Advanced Guide (Jeff Mazur)
1 Pro/File 2068 (Thomas B. Woods)

TS-1000 & ZX-81 books:

3 User Manuals (1000)
1 T/S 1000/ZX81 User's Handbook (T. Terrell & R. Simpson)
1 ZX81 Basic Book (Robin Norman)
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1 ZX81 BASIC Programming (Steven Vickers)
1 ZX81 Programming For Real Applications (Randle Hurley)
1 37 Timex 1000/Sinclair ZX81 Programs For Home, School, Office (Edard Page)
1 Brain Games (John Stephenson)
1 The Explorer's Guide - ZX81 & T/S 1000 (Mike Lord)
1 Mastering Machine Code - T/S 1500/1000 (Toni Baker)
8 QuarTerS - Spring/85 through Winter/86
1 (SQ) Syntax Quarterly Vol,2 #1
28 SUM August/84 thru July/86
2 Sync (Special issue) 1982?
6 Sync Vol.3 #3 through Vol.4 #2
12 Syncware News Vol.2 #1 through Vol.3 #6
1 " " "(Catalog) Vol.1 June/83 thru June/84
6 Syntax Vol.3 #3 and Vol.5 #7 thru #11
17 Time Designs Vol.#3, #6, Vol.2 #1, #5, #6 Vol.3 #1 Through Vol.4 #6
8 Timex Sinclair User Vol.1 #1 through #7
21 T-S Horizons Issue #1 through #21
28 UPDATE Jan.88 through Oct.94

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Who is doing it?

QL Today is being published by Jochen Merz Software. Jochen Merz has been supplying software for the QL for several years and has built up a good reputation for quality and fair trading. The representative in Britain is Miracle Systems Ltd. who take subscriptions and do the distribution. The articles in the magazine are written by a number of prominent QLers and the editor is Dilwyn Jones.

What happened to IQLR?

Bob Dyl suffered another heart attack and has decided to cease producing IQLR. It also appears that it was not profitable for him to carry on doing it partly owing to high cost of sending the magazines from USA to Europe where most QL users are.

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